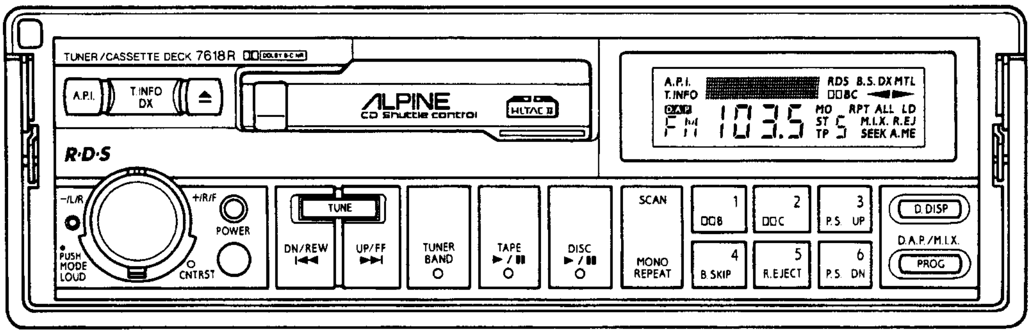
ALPINE **SERVICE MANUAL**

FM/MW/LW/RDS Cassette Player

- For the cassette deck mechanism parts (GR75H030) of this model, refer to the Service Manual • GR/GR-Y Series (68P20504W05)


TUNER/CASSETTE DECK 7618R
A.P.I.
T.INFO
DX
ALPINE
CD Shuttle control
HLTAC II
R·D·S
A.P.I.
T.INFO
D.A.P.
FM 103.5
RDS B.S. DX MTL
MO RPT ALL LD
ST 5 M.I.X. R.EJ
TP SEEK A.ME
–/L/R
+/R/F
POWER
PUSH
MODE
LOUD
CNTRST
TUNE
DN/REW
UP/FF
TUNER
BAND
TAPE
DISC
SCAN
MONO
REPEAT
1
DDB
2
DDC
3
P.S. UP
4
B.SKIP
5
R.EJECT
6
P.S. DN
D.DISP
D.A.P./M.I.X.
PROG

7618R

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Spare Schematic Diagram Inserted.

Specifications

FM RADIO

Intermediate Frequency	10.7±0.1MHz
Frequency Range	87.5~108MHz
Usable Sensitivity (Stereo at 98.1MHz)	17.2dBf
-10dB Limiting Sensitivity (at 98.1MHz)	17.2±6dBf
S/N Ratio (Stereo 60dB 98.1MHz)	48dB
IF Rejection (at 90.1MHz)	60dB
Distortion (Input 1mV at 98.1MHz)	1%
Frequency Response (Ref. 400Hz)	100Hz 0±3dB
	10KHz -12±3dB
Stereo Separation (at 1,000Hz)	25dB
SK Sensitivity (at 98.1MHz)	25.2dBf
PS Sensitivity (at 98.1MHz)	36.2dBf
TP Sensitivity (at 98.1MHz)	36.2dBf

MW RADIO

Intermediate Frequency	450kHz
Frequency Range	531~1,602KHz
Sensitivity 20dB S/N (at 1,404kHz)	34dB
S/N Ratio (at 999kHz)	44dB
Image Rejection (at 1,404kHz)	50dB
IF Rejection (at 603kHz)	60dB
Distortion (at 999kHz)	1.5%
Frequency Response (999kHz at Ref. 400Hz)	100Hz -3±4dB
	4KHz -12±6dB

LW RADIO

Intermediate Frequency	450kHz
Frequency Range	153~281KHz
Sensitivity 20dB S/N (at 216kHz)	41dB
S/N Ratio (at 216kHz)	40dB
Image Rejection (at 216kHz)	50dB
IF Rejection (at 216kHz)	50dB
Distortion (at 216kHz)	1.5%
Frequency Response (216kHz at Ref. 400Hz)	100Hz -3±4dB
	4kHz -12±6dB

TAPE PLAYER

Wow & Flutter (JIS, WRMS/MTT-111N)	0.2%
Tape Speed (MTT-111N)	4.76cm/sec. +3 to -1%
Signal to Noise Ratio (MTT-212)	Dolby OFF 52dB
	Dolby B 58dB
	Dolby C 65dB
Distortion (MTT-118N)	2%
Frequency Response (Ref. 1kHz, -3dB, MTT-256)	63Hz~12.5kHz
Separation (MTT-141N)	30dB
Crosstalk (MTT-121N)	45dB
FF & REW Time (C-60)	115sec.

GENERAL

Power Supply	DC14.4V
Pre Output Voltage / Impedance	1V / 10kohm
Semiconductors	37 IC's, 80 Transistors, 27 Diodes, 10 Zener Diodes
Dimension (W × H × D)	Nose 171 × 50 × 15 mm Chassis · 178 × 50 × 160 mm
Weight	1.6kg

Note : Due to Continuing product improvement, specifications and designs are subject to change without notice.

ERROR INDICATION FOR CD SHUTTLE

INDICATION	CAUSE	SOLUTION
ERROR–01	Disc-change malfunction.	Consult your Alpine dealer.
	Disc-change malfunction.	Press the magazine eject button and pull out the Magazine. Check for error indication. Insert the magazine again. If the magazine can not be pulled out, consult your Alpine dealer.
	Magazine ejection impossible.	Press the magazine eject button. If the magazine does not eject, consult your Alpine dealer.
ERROR–02	Disc is in player mechanism.	Press the magazine eject button, and insert an empty magazine.
---H	High Temperature.	Will disappear when the temperature returns to operation range.
EEEE	Misconnection or disconnection of CD Shuttle.	Check connection between CD Shuttle and control unit.

INDICATION FOR 7618R

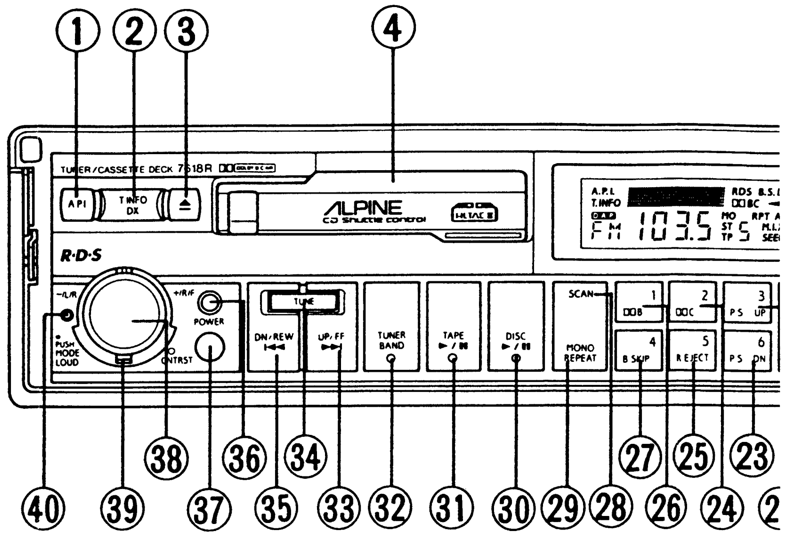
INDICATION	MEANING
NO MAGZN	The magazine is not installed into the CD Shuttle.
NO DISC	No discs are in the magazine.

FEATURES

- **FULL FRONT DIN™ CHASSIS**
- **CD SHUTTLE™ CONTROL**
- **Q.R.B. (QUICK RELEASE BRACKET)**
- **GR-HIGH PRECISION/LOW NOISE FULL LOGIC**
- **WIRELESS REMOTE CONTROL**
  The 7618R comes equipped with a wireless remote control that can control cassette, tuner and CD Shuttle™ functions.
- **I.D. (INTERACTIVE DISPLAY)**
  Interactive Display uses an alpha-numeric dot matrix screen to acknowledge the commands received and display other pertinent information.
- **HLTAC II™ TAPE HEAD**
  Alpine's proprietary HLTAC II tape head features Oxygen Free Copper (OFC) coil windings to prevent low level signal loss and corrosion. It also features a super-close-tolerance, extremely narrow 0.8 micron head gap for exceptionally flat and accurate frequency response.
- **P.S. (PROGRAM SENSOR)**
  Program Sensor allows skipping up to 9 tracks on the tape in either forward or reverse directions.
- **A.P.I. (AUTO PROGRAM IDENTIFICATION)**
  While A.P.I. function turns on in the FM mode, a best receptive RDS station which has same program as the station you are receiving automatically can be received.
- **T. INFO (TRAFFIC INFORMATION)**
  While T. INFO function turns on, a traffic information service automatically can be received when a station transmit.
- **D.A.P. (DIRECT ACCESS PRESETS)**
- **A. MEMO (INTELLIGENT AUTO MEMORY)**
- **REPEAT (TAPE, CD)**
- **SCAN (TAPE, CD)**
- **BLANK SKIP**
- **DOLBY* B/C NOISE REDUCTION**
- **S.T.M. (SOURCE TONE MEMORY)**
  Automatically memorizes the settings of your Bass/Treble Controls for each source.
- **DUAL PRE-AMP OUTPUTS**
  Dual pre-amp outputs, along with a pre-amp fader, make easy and complete system expansion possible.
- **LITETOUCH™ 30-STATION PRESETS**
  FM1 : 6, FM2 : 6, MW : 6, LW : 6, D.A.P.: 6

* Dolby noise reduction manufactured under license from Dolby Laboratories Licensing Corporation. "DOLBY" and the double-D symbol (ᗡᗞ) are trademarks of Dolby Laboratories Licensing Corporation.

CONTROLS AND INDICATORS


①
②
③
④
TUNER/CASSETTE DECK 7618R
API
T.INFO DX
ALPINE
CD Shuttle control
R·D·S
–/L/R
+/R/F
PUSH MODE LOUD
CNTRST
POWER
TUNE
DN/REW
UP/FF
TUNER BAND
TAPE
DISC
SCAN
MONO REPEAT
1 DOB
2 DOC
3 PS UP
4 B SKIP
5 REJECT
6 PS DN
㊳
㊱
㉞
㉗
㉕
㉓
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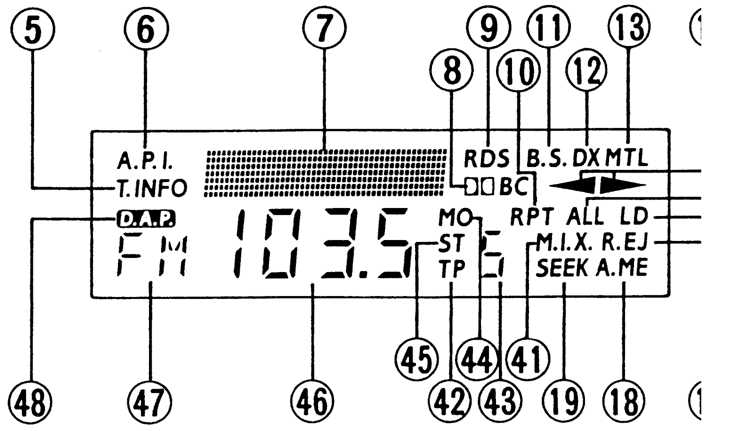
⑤
⑥
⑦
⑨
⑪
⑬
⑧
⑩
⑫
A.P.I.
T.INFO
RDS
B.S.
DX
MTL
BC
D.A.P.
MO
RPT
ALL
LD
ST
M.I.X.
R.EJ
FM
103.5
TP
SEEK
A.ME
㊺
㊹
㊶
㊽
㊼
㊻
㊷
㊸
⑲
⑱

FEATURES

FRONT DIN™ CHASSIS

HUTTLE™ CONTROL

. (QUICK RELEASE BRACKET)

IGH PRECISION/LOW NOISE FULL LOGIC

LESS REMOTE CONTROL

618R comes equipped with a wireless remote control that can control cassette, and CD Shuttle™ functions.

NTERACTIVE DISPLAY)

ctive Display uses an alpha-numeric dot matrix screen to acknowledge the ıands received and display other pertinent information.

C II™ TAPE HEAD

's proprietary HLTAC II tape head features Oxygen Free Copper (OFC) coil ıgs to prevent low level signal loss and corrosion. It also features a -close-tolerance, extremely narrow 0.8 micron head gap for exceptionally flat and ıte frequency response.

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A.P.I. function turns on in the FM mode, a best receptive RDS station which has program as the station you are receiving automatically can be received.

O (TRAFFIC INFORMATION)

T. INFO function turns on, a traffic information service automatically can be ed when a station transmit.

. (DIRECT ACCESS PRESETS)

MO (INTELLIGENT AUTO MEMORY)

AT (TAPE, CD)

(TAPE, CD)

K SKIP

Y* B/C NOISE REDUCTION

. (SOURCE TONE MEMORY)

ıatically memorizes the settings of your Bass/Treble Controls for each source.

PRE-AMP OUTPUTS

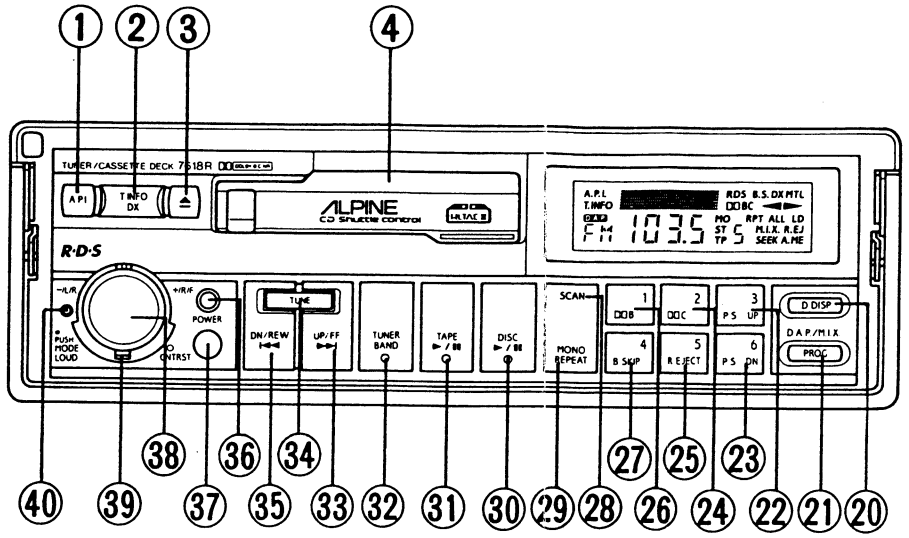
re-amp outputs, along with a pre-amp fader, make easy and complete system sion possible.

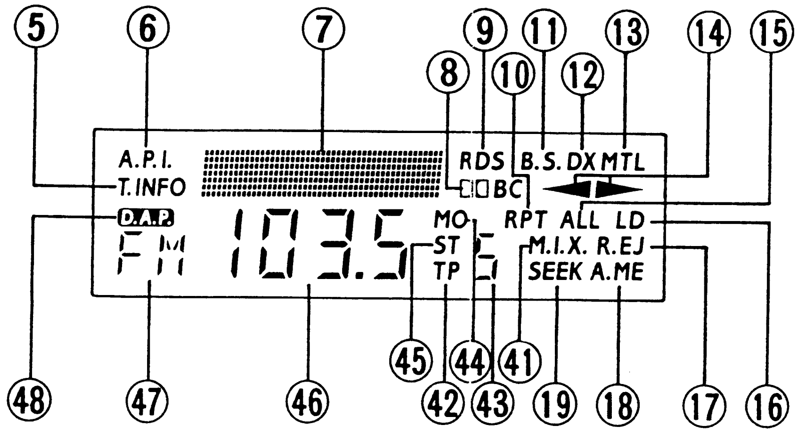
OUCH™ 30-STATION PRESETS

6, FM2 : 6, MW : 6, LW : 6, D.A.P.: 6

noise reduction manufactured under license from Dolby Laboratories Licensing ation. "DOLBY" and the double-D symbol (DD) are trademarks of Dolby ıtories Licensing Corporation.

CONTROLS AND INDICATORS

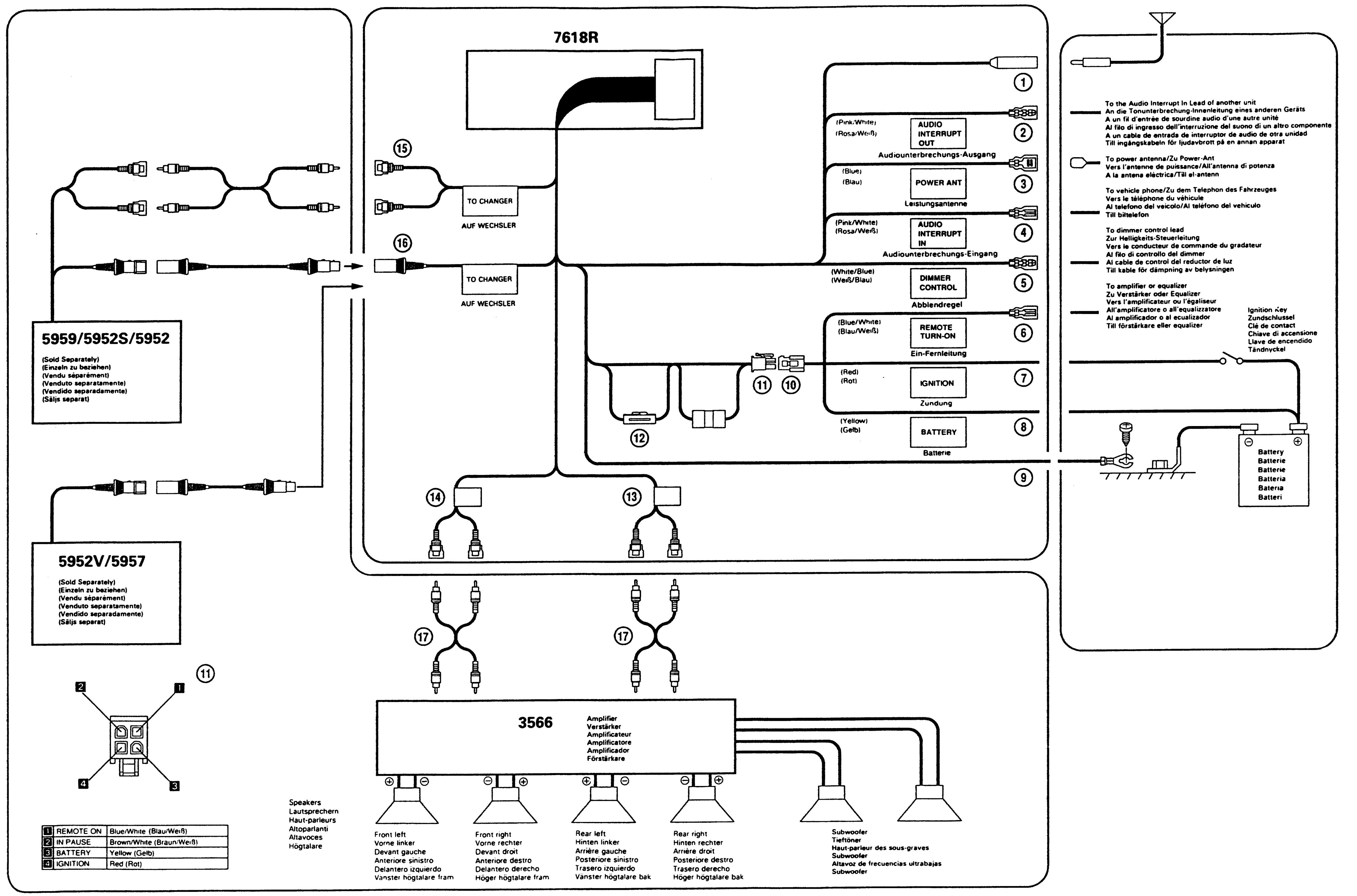




CONTROLS AND INDICATORS

① **Auto Program Identification Button**
② **Traffic INFOrmation/DX (Local/Distance) Button**
③ **Eject Button**
④ **Cassette Loading Slot**
⑤ **T. INFO Indicator**
⑥ **A.P.I. Indicator**
⑦ **Dot Matrix Display**
⑧ **Dolby B/C NR Indicator**
⑨ **RDS Indicator**
⑩ **RePeaT Indicator**
⑪ **Blank Skip Indicator**
⑫ **DX Indicator**
⑬ **MeTaL Indicator**
⑭ **Tape Direction Indicators**
⑮ **ALL Indicator**
⑯ **LouDness Indicator**
⑰ **Return EJect Indicator**
⑱ **A. MEmo Indicator**
⑲ **SEEK Indicator**
⑳ **Demonstration DISPlay Button**
㉑ **PROGram/D.A.P. (Direct Access Preset)/M.I.X. Button**
㉒ **Preset and Direct Disc Access No. 3/P.S. UP Button**
㉓ **Preset and Direct Disc Access No. 6/P.S. DN Button**
㉔ **Preset and Direct Disc Access No. 2/Dolby C NR Button**
㉕ **Preset and Direct Disc Access No. 5/Return EJECT Button**
㉖ **Preset and Direct Disc Access No. 1/Dolby B NR Button**
㉗ **Preset and Direct Disc Access No. 4/Blank SKIP Button**
㉘ **SCAN Button**
㉙ **MONO/REPEAT Button**
㉚ **DISC (Play ▶ /Pause ❚❚) Button**
㉛ **TAPE (Play ▶ /Pause ❚❚) Button**
㉜ **TUNER/BAND Button**
㉝ **UP/FF Switch (⏭)**
㉞ **TUNE Switch**
㉟ **DN/REW Switch (⏮)**
㊱ **POWER On/Off Switch (PUSH)**
㊲ **Sensor Window for Remote Control**
㊳ **Audio MODE Select Switch/Volume up down/LOUDness Button**
㊴ **CoNTRaST Control**
㊵ **Reset Switch**
㊶ **M.I.X. Indicator**
㊷ **TP Indicator**
㊸ **Preset No./Disc No. Indicator**
㊹ **MOnaural Indicator**
㊺ **STereo Indicator**
㊻ **Digital Display**
㊼ **Band/Track No. Indicator**
㊽ **D.A.P. Indicator**

CONNECTIONS


7618R
①
(Pink/White)
(Rosa/Weiß)
AUDIO INTERRUPT OUT
Audiounterbrechungs-Ausgang
②
(Blue)
(Blau)
POWER ANT
Leistungsantenne
③
(Pink/White)
(Rosa/Weiß)
AUDIO INTERRUPT IN
Audiounterbrechungs-Eingang
④
(White/Blue)
(Weiß/Blau)
DIMMER CONTROL
Abblendregel
⑤
(Blue/White)
(Blau/Weiß)
REMOTE TURN-ON
Ein-Fernleitung
⑥
(Red)
(Rot)
IGNITION
Zundung
⑦
(Yellow)
(Gelb)
BATTERY
Batterie
⑧
⑨
⑩
⑪
⑫
⑬
⑭
⑮
⑯
⑰
⑰
TO CHANGER
AUF WECHSLER
TO CHANGER
AUF WECHSLER
5959/5952S/5952
(Sold Separately)
(Einzeln zu beziehen)
(Vendu séparément)
(Venduto separatamente)
(Vendido separadamente)
(Säljs separat)
5952V/5957
(Sold Separately)
(Einzeln zu beziehen)
(Vendu séparément)
(Venduto separatamente)
(Vendido separadamente)
(Säljs separat)
To the Audio Interrupt In Lead of another unit
An die Tonunterbrechung-Innenleitung eines anderen Geräts
A un fil d'entrée de sourdine audio d'une autre unité
Al filo di ingresso dell'interruzione del suono di un altro componente
A un cable de entrada de interruptor de audio de otra unidad
Till ingångskabeln för ljudavbrott på en annan apparat
To power antenna/Zu Power-Ant
Vers l'antenne de puissance/All'antenna di potenza
A la antena eléctrica/Till el-antenn
To vehicle phone/Zu dem Telephon des Fahrzeuges
Vers le téléphone du véhicule
Al telefono del veicolo/Al teléfono del vehiculo
Till biltelefon
To dimmer control lead
Zur Helligkeits-Steuerleitung
Vers le conducteur de commande du gradateur
Al filo di controllo del dimmer
Al cable de control del reductor de luz
Till kable för dämpning av belysningen
To amplifier or equalizer
Zu Verstärker oder Equalizer
Vers l'amplificateur ou l'égaliseur
All'amplificatore o all'equalizzatore
Al amplificador o al ecualizador
Till förstärkare eller equalizer
Ignition Key
Zundschlussel
Clé de contact
Chiave di accensione
Llave de encendido
Tändnyckel
Battery
Batterie
Batterie
Batteria
Bateria
Batteri
⑪
2
1
4
3
3566
Amplifier
Verstärker
Amplificateur
Amplificatore
Amplificador
Förstärkare
Speakers
Lautsprechern
Haut-parleurs
Altoparlanti
Altavoces
Högtalare
Front left
Vorne linker
Devant gauche
Anteriore sinistro
Delantero izquierdo
Vänster högtalare fram
Front right
Vorne rechter
Devant droit
Anteriore destro
Delantero derecho
Höger högtalare fram
Rear left
Hinten linker
Arrière gauche
Posteriore sinistro
Trasero izquierdo
Vänster högtalare bak
Rear right
Hinten rechter
Arrière droit
Posteriore destro
Trasero derecho
Höger högtalare bak
Subwoofer
Tieftöner
Haut-parleur des sous-graves
Subwoofer
Altavoz de frecuencias ultrabajas
Subwoofer

1	REMOTE ON	Blue/White (Blau/Weiß)
2	IN PAUSE	Brown/White (Braun/Weiß)
3	BATTERY	Yellow (Gelb)
4	IGNITION	Red (Rot)

CONNECTIONS

① **Antenna Receptacle**

② **Audio Interrupt Out Lead (Pink/White)**

③ **Power Antenna Lead (Blue)**
When loaded with a power antenna, connect to the
nal of the power antenna.

④ **Audio Interrupt In Lead (Pink/White)**

⑤ **Dimmer Control Lead (White/Blue)**
Connect this lead to the lead in the vehicle's parking
cuit that provides (+)12V when the parking lights a
on. This will dim the unit's backlighting at night
parking lights are on.

⑥ **Remote Turn-On Lead (Blue/White)**
Connect this lead to the remote turn-on lead of you
or signal processor.

⑦ **Switched Power Lead (Ignition) (Red)**
Connect this lead to an open terminal on the vehi
box or another unused power source which provid
only when the ignition is turned on or in the acces
tion.

⑧ **Battery Lead (Yellow)**
Connect this lead to the positive (+) post of the veh
tery.

⑨ **Ground Lead**
Connect this lead to a good chassis ground on th
Make sure the connection is made to bare metal and
ly fastened using the sheet metal screw provided.

⑩ **Power Wiring Harness (Included)**
Connect to the Power Supply Connector ⑪.

⑪ **Power Supply Connector**
Connect to the receptacle of Power Wiring Harnes

⑫ **Fuse Holder (3A)**

⑬ **Rear Output RCA Connectors**
RED is right and WHITE is left.

⑭ **Front Output RCA Connectors**
RED is right and WHITE is left.

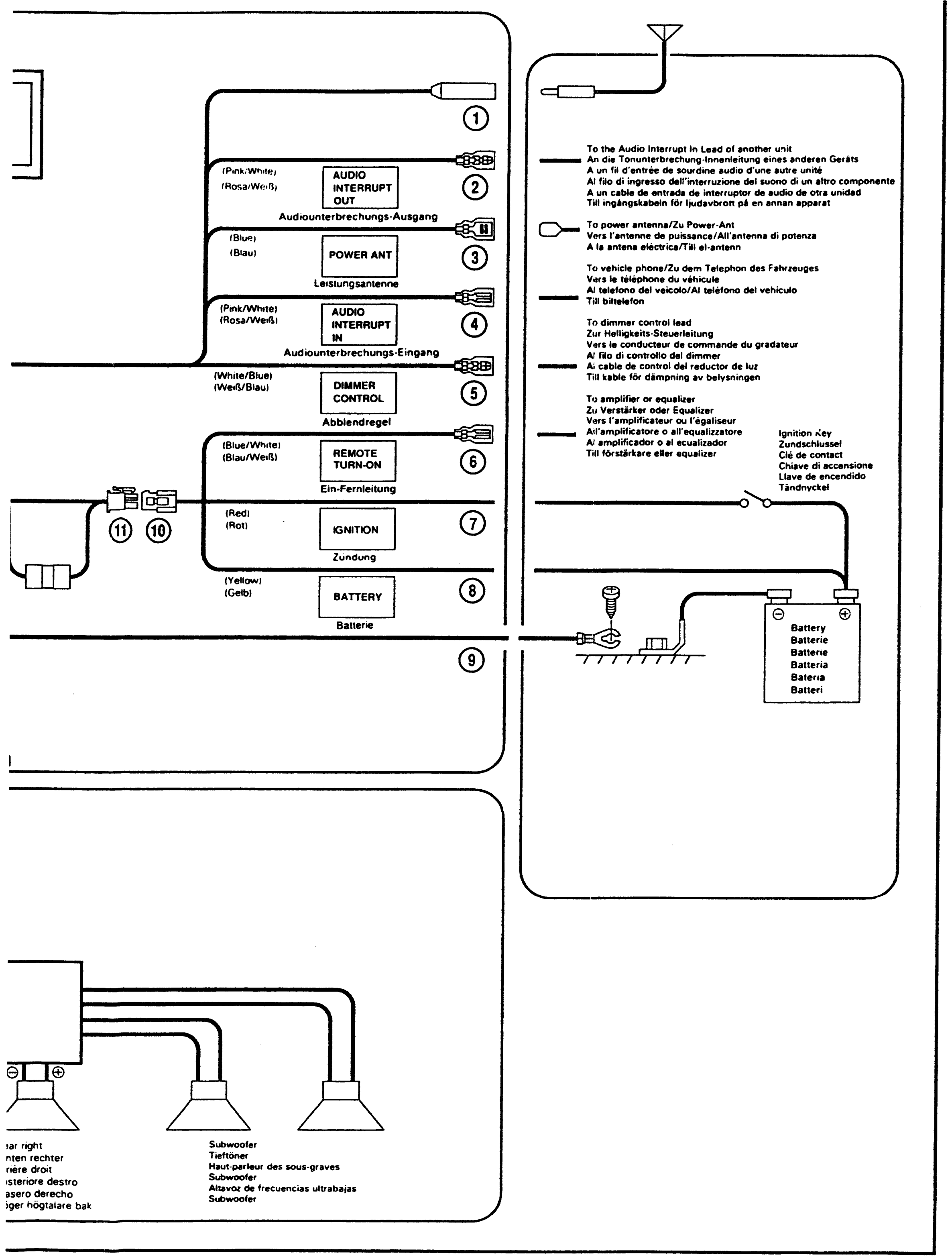
⑮ **CD Shuttle Input RCA Connectors**
Connect to CD Shuttle output only.

⑯ **DIN Connector**
Connect this to the DIN connector on the CD Shut

⑰ **Extension Cable (Sold Separately)**

IONS

CONNECTIONS


①
(Pink/White)
(Rosa/Weiß)
AUDIO INTERRUPT OUT
Audiounterbrechungs-Ausgang
②
(Blue)
(Blau)
POWER ANT
Leistungsantenne
③
(Pink/White)
(Rosa/Weiß)
AUDIO INTERRUPT IN
Audiounterbrechungs-Eingang
④
(White/Blue)
(Weiß/Blau)
DIMMER CONTROL
Abblendregel
⑤
(Blue/White)
(Blau/Weiß)
REMOTE TURN-ON
Ein-Fernleitung
⑥
⑪ ⑩
(Red)
(Rot)
IGNITION
Zundung
⑦
(Yellow)
(Gelb)
BATTERY
Batterie
⑧
⑨
To the Audio Interrupt In Lead of another unit
An die Tonunterbrechung-Innenleitung eines anderen Geräts
A un fil d'entrée de sourdine audio d'une autre unité
Al filo di ingresso dell'interruzione del suono di un altro componente
A un cable de entrada de interruptor de audio de otra unidad
Till ingångskabeln för ljudavbrott på en annan apparat
To power antenna/Zu Power-Ant
Vers l'antenne de puissance/All'antenna di potenza
A la antena eléctrica/Till el-antenn
To vehicle phone/Zu dem Telephon des Fahrzeuges
Vers le téléphone du véhicule
Al telefono del veicolo/Al teléfono del vehiculo
Till biltelefon
To dimmer control lead
Zur Helligkeits-Steuerleitung
Vers le conducteur de commande du gradateur
Al filo di controllo del dimmer
Al cable de control del reductor de luz
Till kable för dämpning av belysningen
To amplifier or equalizer
Zu Verstärker oder Equalizer
Vers l'amplificateur ou l'égaliseur
All'amplificatore o all'equalizzatore
Al amplificador o al ecualizador
Till förstärkare eller equalizer
Ignition Key
Zundschlussel
Clé de contact
Chiave di accensione
Llave de encendido
Tändnyckel
Battery
Batterie
Batterie
Batteria
Bateria
Batteri
ear right
nten rechter
rière droit
steriore destro
asero derecho
ger högtalare bak
Subwoofer
Tieftöner
Haut-parleur des sous-graves
Subwoofer
Altavoz de frecuencias ultrabajas
Subwoofer

① **Antenna Receptacle**

② **Audio Interrupt Out Lead (Pink/White)**

③ **Power Antenna Lead (Blue)**
When loaded with a power antenna, connect to the +B terminal of the power antenna.

④ **Audio Interrupt In Lead (Pink/White)**

⑤ **Dimmer Control Lead (White/Blue)**
Connect this lead to the lead in the vehicle's parking lights circuit that provides (+)12V when the parking lights are turned on. This will dim the unit's backlighting at night when the parking lights are on.

⑥ **Remote Turn-On Lead (Blue/White)**
Connect this lead to the remote turn-on lead of your amplifier or signal processor.

⑦ **Switched Power Lead (Ignition) (Red)**
Connect this lead to an open terminal on the vehicle's fuse box or another unused power source which provides (+)12V only when the ignition is turned on or in the accessory position.

⑧ **Battery Lead (Yellow)**
Connect this lead to the positive (+) post of the vehicle's battery.

⑨ **Ground Lead**
Connect this lead to a good chassis ground on the vehicle. Make sure the connection is made to bare metal and is securely fastened using the sheet metal screw provided.

⑩ **Power Wiring Harness (Included)**
Connect to the Power Supply Connector ⑪.

⑪ **Power Supply Connector**
Connect to the receptacle of Power Wiring Harness ⑩.

⑫ **Fuse Holder (3A)**

⑬ **Rear Output RCA Connectors**
RED is right and WHITE is left.

⑭ **Front Output RCA Connectors**
RED is right and WHITE is left.

⑮ **CD Shuttle Input RCA Connectors**
Connect to CD Shuttle output only.

⑯ **DIN Connector**
Connect this to the DIN connector on the CD Shuttle.

⑰ **Extension Cable (Sold Separately)**

OPERATION

● BASIC OPERATION

Function Confirmation Display

With each touch on the function buttons, your selection is shown on the dot matrix display ⑦ in large characters for 2 seconds.

Initial System Start

When operating the system for the first time after installation or after the vehicle's battery has been disconnected and reconnected, set the volume level to its minimum, then carefully press the Reset switch ㊵ with a sharp pencil or any other pointed object.

How to adjust the volume and tone (Refer to the diagram in next page.)

1. Turn on the system by pushing the POWER On/Off switch ㊱ or any other button (other than Eject ③ or Reset ㊵).
2. Press the Audio MODE Select switch ㊳ to select each adjusting mode.
   → TREBLE → BASS → BALANCE → FADER → VOLUME

   Each time this switch is pressed, the mode changes. The mode is indicated in the display. The mode indicator changes as each mode is selected.
3. Once the desired mode appears in the display, use the Audio MODE Select switch ㊳ to make your adjustment. The display will return to the previous mode indication after 5 seconds.

Power Off

Press the POWER On/Off switch ㊱ to turn the unit Off.

LOUDness

Press the LOUD button ㊳ for more than 2 seconds to activate the loudness function. Press the LOUD button ㊳ for more than 2 seconds again to defeat this feature.

Mode Switching of the 7618R

1. Radio Mode
   Press the TUNER button ㉜ to put the unit into the radio mode. The Band indicator ㊼ (FM1, FM2 or MW/LW) will appear in the display.
2. Cassette Player Mode
   Press the TAPE button ㉛ to put the unit into the cassette player mode.
3. CD Shuttle Mode
   Press the DISC button ㉚ to put the unit into the CD mode.

CoNTRaST Control ㉝

Use this control to adjust the brigthness of the dot matrix display based on your angle of sight.

Six Modes Setting Function

This unit allows setting of six modes shown below. For further details, refer to the description on each mode.

Preset No. 1: FM level switching.
Preset No. 2: Sound volume setting during reception of traffic information.
Preset No. 3: Operation switching when a traffic information station is not received.
Preset No. 4: Operation switching for Q.R.B. Minder.
Preset No. 5: Switching of automatic tracing function. (API-1/API-2)
Preset No. 6: Built-in lighting switch function (amber/green).

Indication example	Turn the Audio MODE Select switch.	
	Left	Right
VOLUME adjust. VOLUME - 2 6 (-∞ ~ 0)	Volume decrease VOLUME - o o	Volume increase VOLUME 0
TREBLE adjust. TREBLE - 4 (-7 ~ +7)	Treble decrease TREBLE - 7	Treble increase TREBLE + 7
BASS adjust. BASS - 3 (-7 ~ +7)	Bass decrease BASS - 7	Bass increase BASS + 7
BALANCE adjust. BALANCE - - - (0 ~ 8)	Volume increase of left speaker BALANCE L 8	Volume increase of right speaker BALANCE R 8
FADER adjust. FADER - - - (0 ~ 8)	Volume increase of rear speaker FADER R 8	Volume increase of front speaker FADER F 8

S.T.M. (Source Tone Memory)

The Bass and Treble controls can be individually set for each source (FM, MW/LW, Tape, and CD). Once set, their positions are automatically memorized. Whenever the source is reselected, the Bass and Treble controls will return to your preset configuration.

Message Display

A message about your new 7618R was input at the factory. Press the D. DISP button ⑳ to display the Alpine message. Pressing the D. DISP button ⑳ again deactivates this function.

Switching the Lighting Color

Lighting colors (amber/green) for the front panel can be changed.

1. Press the TUNE switch ㉞ for 3 seconds.
2. Press the Preset No. 6 button ㉓ to switch the lighting between green and amber.

● RADIO OPERATION

Tuning Band Selection

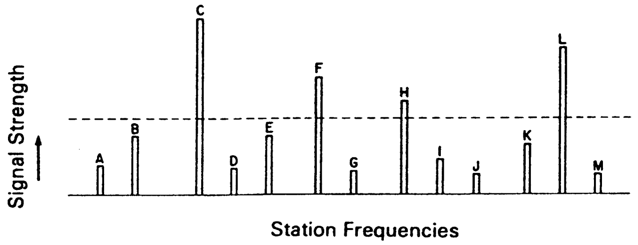
Press the BAND button ㉜ to select the desired tuning band. The Band indicator shows your selection.

Local/Distance (DX) Seek Sensitivity for FM, MW and LW

You can select the radio seek sensitivity local or distance (DX), by pressing the DX (distance) button ② for more than 2 seconds.

In the local mode, with no DX indication ⑫, the radio tunes in only strong stations (stations C, F, H and L in the illustration below).

In the distance mode, with DX indication ⑫, the radio tunes in both strong and weak stations (all stations from A to M in the illustration).



FM Stereo/Monaural Switching

You can select between the Auto Switching or Monaural only for FM reception by pressing the MONO button ㉙. In the Auto Switching mode, you can receive stereo broadcasts in stereo and monaural broadcasts in MONO. The STereo ㊺ or MO indicator ㊹ shows you which one is being received. In the Monaural mode, you will receive the broadcast in monaural only, even if the broadcast is in stereo. The monaural only mode quiets the noisy stereo signal of weaker broadcasts. The STereo indicator ㊺ will not appear while the monaural mode is selected.

Manual Tuning

1. Press the TUNE switch ㉞ until the MANUAL indicator appears in the dot matrix display ⑦.
2. To select the tuning band, press the BAND button ㉜. The Band indicator shows your selection.
3. To tune to higher frequencies, press the UP switch ㉝.
   To tune to lower frequencies, press the DN switch ㉟.

Auto SEEK Tuning

1. Press the TUNE switch ㉞ until the SEEK indicator ⑲ appears in the display.
2. Select the tuning band with the BAND button ㉜.
3. Press the UP (▶▶|) ㉝ or DN (|◀◀) ㉟ switch. The unit automatically tunes to the next higher or lower frequency and locks on that station.

Preset Memory Programming

Follow the instructions below to program stations into preset memory:

1. Select the tuning band (FM1, FM2, MW or LW) with the BAND button ㉜.
2. Tune in your desired station using Manual or Auto SEEK tuning.
3. Press the Preset button number 1 ㉖ for more than 2 seconds. The digital c
   will begin to blink. Press that preset button again while the display is blinkir
   seconds).
4. The frequency you selected will be placed into Preset Memory number 1 ai
   appear in the display.

   NOTE:

   If a preset memory has already been set in the same address, it will be (
   the new station will be memorized.
5. Follow steps 2 — 3 for the remaining presets (2 — 6). Use this procedure fc
   FM2, MW and LW.

Auto MEMOry Preset

1. Press the TUNE switch ㉞ to light up the A. ME indicator ⑱.
2. Select the desired tuning band (FM1, FM2, MW or LW) with the BAND but
3. Press the UP ㉝ or DN ㉟ switch. The tuner will automatically seek the 6 st
   stations in each band and memorize them in order of the signal strength. T
   stations are automatically placed in the preset memory with the strongest s
   Preset No. 1 and the 6th strongest station in Preset No. 6. When seeking s
   tuner first seeks in the local tuning mode. If less than 6 stations are memo
   tuner seeks again in the distance (DX) mode.
4. After finishing the Auto Memory Preset, the tuner goes to the station place
   Memory No. 1. If no stations are memorized, it returns to the original static
   listening to before the Auto Memory Preset procedure began. When auto n
   presetting is completed, the A. ME indicator ⑱ will disappear and the SEEK
   ⑲ will appear.

NOTE:

The Auto Memory Preset feature also works in the D.A.P. mode.

Preset Tuning

After the preset stations have been memorized, you can tune in your desired
(within the band displayed) with one touch of a button.

1. Select the tuning band (FM1, FM2, MW or LW) with the BAND button ㉜.
2. Press any one of the Preset buttons (㉒ — ㉗) and the number of that Prese
   illuminate in the dot matrix display ⑦.
3. The frequency of the station placed in the selected preset location will appe
   display.

D.A.P. (Direct Access Preset)

This feature allows the storage of FM, MW and LW presets on the same bar
the D.A.P. button ㉑ to light up the D.A.P. indicator ㊽. To program stations intc
band, follow steps 1 — 3 as described in the Preset Memory Programming sect

Accessing the D.A.P. Presets

1. Press the D.A.P. button ㉑. The D.A.P. indicator ㊽ will illuminate in the dis
2. Press one of the preset buttons (㉒ — ㉗).
3. The frequency of the station placed in the selected D.A.P. location will appe
   display.

Switching the FM Volume

Use this function if the difference in volume is great when switching betwee
and the FM radio.

1. Press the TUNE switch ㉞ for 3 seconds.
2. Press the Preset No. 1 button ㉖ to switch the display between "FM-LV Hi"
   "FM-LV Lo".
   The FM volume can be set to one of two positions, high or low. Set the po
   according to the broadcast station.

FM-LV Hi ←→ FM-LV Lo

IO OPERATION

Band Selection

the BAND button ㉜ to select the desired tuning band. The Band indicator shows
ection.

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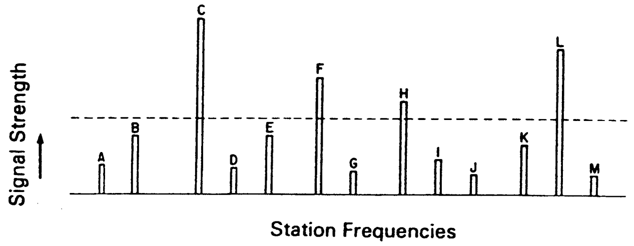

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Tuning

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ine to lower frequencies, press the DN switch ㉟.

EK Tuning

s the TUNE switch ㉞ until the SEEK indicator ⑲ appears in the display.
t the tuning band with the BAND button ㉜.
s the UP (▶▶I) ㉝ or DN (I◀◀) ㉟ switch. The unit automatically tunes to the next
r or lower frequency and locks on that station.

Preset Memory Programming

Follow the instructions below to program stations into preset memory:

1. Select the tuning band (FM1, FM2, MW or LW) with the BAND button ㉜.
2. Tune in your desired station using Manual or Auto SEEK tuning.
3. Press the Preset button number 1 ㉖ for more than 2 seconds. The digital display ㊻ will begin to blink. Press that preset button again while the display is blinking (within 5 seconds).
4. The frequency you selected will be placed into Preset Memory number 1 and will appear in the display.
   NOTE:
   If a preset memory has already been set in the same address, it will be cleared and the new station will be memorized.
5. Follow steps 2 — 3 for the remaining presets (2 — 6). Use this procedure for FM1, FM2, MW and LW.

Auto MEMOry Preset

1. Press the TUNE switch ㉞ to light up the A. ME indicator ⑱.
2. Select the desired tuning band (FM1, FM2, MW or LW) with the BAND button ㉜.
3. Press the UP ㉝ or DN ㉟ switch. The tuner will automatically seek the 6 strongest stations in each band and memorize them in order of the signal strength. These stations are automatically placed in the preset memory with the strongest station in Preset No. 1 and the 6th strongest station in Preset No. 6. When seeking stations, the tuner first seeks in the local tuning mode. If less than 6 stations are memorized, the tuner seeks again in the distance (DX) mode.
4. After finishing the Auto Memory Preset, the tuner goes to the station placed in Preset Memory No. 1. If no stations are memorized, it returns to the original station you were listening to before the Auto Memory Preset procedure began. When auto memory presetting is completed, the A. ME indicator ⑱ will disappear and the SEEK indicator ⑲ will appear.

NOTE:

The Auto Memory Preset feature also works in the D.A.P. mode.

Preset Tuning

After the preset stations have been memorized, you can tune in your desired station (within the band displayed) with one touch of a button.

1. Select the tuning band (FM1, FM2, MW or LW) with the BAND button ㉜.
2. Press any one of the Preset buttons (㉒ — ㉗) and the number of that Preset will illuminate in the dot matrix display ⑦.
3. The frequency of the station placed in the selected preset location will appear in the display.

D.A.P. (Direct Access Preset)

This feature allows the storage of FM, MW and LW presets on the same band. Press the D.A.P. button ㉑ to light up the D.A.P. indicator ㊽. To program stations into the D.A.P. band, follow steps 1 — 3 as described in the Preset Memory Programming section above.

Accessing the D.A.P. Presets

1. Press the D.A.P. button ㉑. The D.A.P. indicator ㊽ will illuminate in the display.
2. Press one of the preset buttons (㉒ — ㉗).
3. The frequency of the station placed in the selected D.A.P. location will appear in the display.

Switching the FM Volume

Use this function if the difference in volume is great when switching between a tape and the FM radio.

1. Press the TUNE switch ㉞ for 3 seconds.
2. Press the Preset No. 1 button ㉖ to switch the display between "FM-LV Hi" and "FM-LV Lo".
   The FM volume can be set to one of two positions, high or low. Set the position according to the broadcast station.

FM-LV Hi
FM-LV Lo

● TAPE PLAYER OPERATION

Turn the unit on and press the TAPE (▶/II) button ㉛ to access the tape mode.

Dolby* B/C Noise Reduction

Before playing a cassette tape, check to see if it is encoded with Dolby B or C noise reduction. Press the Dolby NR B or C button (㉖ or ㉔) when playing a Dolby NR encoded tape. The Dolby NR B or C indicator ⑧ on the button will illuminate.

Cassette Loading

1. Insert a prerecorded cassette tape into the Cassette Loading Slot ④ with the open side facing to your right.
2. If the cassette tape is not completely loaded into the deck, lightly press the cassette into the slot.

Metal (MTL) Indicator

Metal or CrO_2 cassette tapes having an open detection hole will automatically be detected, in which case the MTL indicator ⑬ in the display comes on and the playback equalization is automatically set to 70μsec.

Eject

Press the Eject button ③ to eject the cassette from the tape mechanism.

Pause

To temporarily stop playback, press the TAPE (▶/II) button ㉛. To resume playback, press the same button again.

Playback

1. Insert a prerecorded cassette tape with the open side facing right. The playback begins immediately.
2. If a cassette tape is already loaded in the unit, press the TAPE (▶/II) button ㉛ to start playback.
3. To stop tape play, press the Eject button ③ or turn the power off with the POWER On/Off switch ㊱.

NOTE:

Push the TUNE switch ㉞ with the tape or CD played in the A.P.I. or T. INFO mode, and the unit will be set to the TUNER mode and the tuning is possible.

True Fast Forward and Rewind

1. Press the FF switch ㉝ to advance the tape quickly. Press the REW switch ㉟ to rapidly run the tape backward. The deck will perform these functions correctly regardless of the tape play direction.
2. To disengage the FF or REW function, press the TAPE (▶/II) button ㉛.

OPERATION

Program Sensor

1. To advance the tape to the beginning of the next musical track, press and release the P.S. UP button ㉒. The display will show "P.S. UP + 1" as shown below. Successive pressing of this button will increase the number of tracks to be skipped as the tape advances. The number in the display will increase accordingly. For example, to go from track 1 to track 4, press the P.S. UP button ㉒ three times (the number in the display will be "+3"). The tape deck searches for blank sections between tracks to the beginning of track 4 and begins playback.
2. To access the beginning of the current musical track, press and release the P.S. DN button ㉓. The display will show "P.S. DN −1". Successive pressing of this button will increase the number of tracks to be skipped as the tape rewinds. The number in the display will increase (in the negative direction) accordingly. For example, to go from track 5 to track 4, press the P.S. DN button ㉓ twice (the number in the display will be "−2" as shown below. The tape deck searches for blank sections between tracks to the beginning of the track 4 and begins playback.

[Example]

P.S. UP
+1

P.S. DOWN
−2

NOTE:

The P.S. cannot detect blank sections of less than 3 seconds.

Auto Reverse

When the tape is played or fast-forwarded to the end, the tape transport automatically reverses the tape direction and playback begins.

Manual Reverse

To manually change playback direction (switch between side A and side B), press the PROG button ㉑.

REPEAT

1. Insert the cassette tape and begin playback.
2. When you find a selection you would like to repeat, press the REPEAT button ㉙ until the RPT indicator appear in the display. This selection will be continuously repeated until the REPEAT function is disengaged.
3. To cancel the repeat function, press the REPEAT button ㉙ again. The RPT indicator ⑩ will disappear.

SCAN

1. Press the SCAN button ㉘ and the deck will play the first 10 seconds of each selection. This feature is convenient when searching for a particular selection on a tape.
2. Once you have located your desired selection, press the SCAN button ㉘ again to defeat this function.

Blank SKIP

1. Press the B. SKIP button ㉗ during playback to skip over any blank sections of tape lasting 15 seconds or more.
2. To cancel the Blank Skip function, press the B. SKIP button ㉗ again.

Return EJECT

1. Insert the cassette tape and begin playback.
2. Press the R. EJECT button ㉕ during one of the following modes and the cassette tape will automatically eject when:
   - Playback mode; After both sides A and B have been played.
   - Fast Forward mode; After the other side has been played.

   The R. EJ indicator ⑰ on that button will light.
3. To cancel the Return Eject mode, press the R. EJECT button ㉕ again.

OPERATION

Tape Running Status Display

The dot matrix display ⑦ indicates tape running status. To turn off the display, push the D. DISP switch ⑳ for more than 2 seconds.

Head Cleaning

When playback sound quality begins to deteriorate, it is time to clean the tape head. Insert a special head cleaning cassette into the tape deck and allow it to run for approximately 1 minute to remove any foreign matter. There are special cleaning cassettes that also clean the capstans and pinch rollers. Please contact your authorized Alpine dealer for information about these cleaning devices.

● CD OPERATION

The following instructions apply only to systems that incorporate the Alpine CD Shuttle with 7618R.

Turn the unit on and access the CD mode by pressing the DISC (▶/❚❚) button ㉚.

Initial System Turn-On

When operating the system for the first time after installation or after the vehicle's battery has been disconnected and reconnected, press the Reset switch ㊵ with a sharp pencil or other pointed object.

Disc Check

When the magazine is loaded into the CD Shuttle under playback status with the DISC (▶/❚❚) button ㉚ pushed, a Disc check for the magazine is carried out.

"DISC CHK" on the dot matrix display ⑦ is blinking during the check, and then the player enters the pause mode after completion of the check.

Normal Play

1. Press the DISC (▶/❚❚) button ㉚.
2. The first disc will begin playback.
3. After the last track on the last disc is played back, the pickup will return to the beginning of the first track of the first disc and begin playback from that point.

Pause

While the disc is playing, press the DISC (▶/❚❚) button ㉚ to temporarily stop playback. The dot matrix display ⑦ will show "PAUSE". To resume playback, press the DISC button (▶/❚❚) ㉚ again.

Music Sensor (Skip)

This feature allows you to access the beginning of your musical track selection simply and quickly. It is functional in the play or pause mode. The Track No. indicator ㊼ shows the track number you have selected.

- To advance to the next track on the disc, press the UP/FF switch ㉝.

1. Playback stops, and the pickup moves up to the beginning of the next track. That track number appears in the Track No. indicator ㊼.
2. Playback begins immediately.
3. If you wish to access a track further ahead on the disc, continue pressing and releasing the UP/FF switch ㉝ until you reach the track of your choice.

- To replay the track that is currently playing, press and release the DN/REW switch ㉟.

1. Playback stops, and the pickup moves back to the beginning of the current track. The track number in the Track No. indicator ㊼ remains the same.
2. Playback begins immediately from the beginning of the track.
3. If you access a track further towards the beginning of the disc, continue pressing and releasing the DN/REW switch ㉟ until you reach the track of your choice.

OPERATION

Direct Disc Access

1. Press one of the Direct Disc Access buttons (㉒ – ㉗) to select from discs 1 – disc and track numbers will appear in the display.
2. Press the UP/FF ㉝ or DN/REW ㉟ switch for musical track selection.

Fast Forward/Fast Backward

The fast forward/fast backward feature works in the play mode only.

1. Press either the FF ㉝ or the REW ㉟ switch and hold it down for more than 1 s
2. To move the pickup forward rapidly, hold down the FF switch ㉝.
3. To move the pickup backward rapidly, hold down the REW switch ㉟.
4. Release the button when you get to the desired position on the disc.
5. When the pickup reaches the end of the disc, it will begin playback from the be of the first track on the next disc.

REPEAT (One/All)

This feature allows you to continuously repeat a single track or one entire disc.

To Repeat a Single Track

1. Locate the music track of your choice using the UP ㉝ or DN ㉟ switch.
2. Press the REPEAT button ㉙.
   The RPT indicator ⑩ will illuminate, and "RPT ONE" indicator on the dot matrix ⑦ will appear.
   The music track will be played back repeatedly.
3. To stop repeat play, press the REPEAT button twice. The "RPT OFF" indication dot matrix display ⑦ will appear.

To Repeat an Entire Disc

1. While playing a disc, press the REPEAT button ㉙ until the RPT ⑩ and ALL ⑮ indicators will illuminate.
2. The disc will be played back repeatedly.
3. To stop repeat play, press the REPEAT button ㉙ once. The indicator illuminatio be off.

Disc Scan

Press the SCAN button ㉘ and the unit will playback the first 10 seconds of each in succession. This function is useful in searching ahead on a disc for a specific sele Pressing the SCAN button ㉘ a second time deactivates the function.

M.I.X. (Random Play)

Press the M.I.X. button ㉑ while the unit is in the play or pause mode. Musical tra the selected disc will be played back in a random sequence generated by the microprocessor. After all the tracks on the disc have been played back once, the pl will begin a new random sequence.

Q.R.B. Minder

This unit is equipped with a built-in theft prevention reminder system. If the unit removed from the Quick Release Bracket after turning the ignition key off, a beeper sound as a reminder to remove the unit.

Whether the ignition is on or off, the unit may beep when it is being removed fro dash.

You can switch the Q.R.B. Minder system on or off by the following.

1. Press the TUNE switch ㉞ for 3 seconds.
2. Press the Preset No. 4 button ㉗ to switch the display between "QRBM ON" and "QRBM OFF".

QRBM ON : Q.R.B. Minder is on.

QRBM OFF : Q.R.B. Minder is off.

NOTE:

The unit is initially set with the Q.R.B. Minder system on. If the vehicle's engine not start for over 2 seconds after turning the ignition key on, the Q.R.B. Minder syst may be triggered.

OPERATION

ng Status Display
atrix display ⑦ indicates tape running status. To turn off the display, push the
tch ⑳ for more than 2 seconds.

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RATION

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OPERATION

Direct Disc Access

1. Press one of the Direct Disc Access buttons (㉒ – ㉗) to select from discs 1 – 6. The disc and track numbers will appear in the display.
2. Press the UP/FF ㉝ or DN/REW ㉟ switch for musical track selection.

Fast Forward/Fast Backward

The fast forward/fast backward feature works in the play mode only.

1. Press either the FF ㉝ or the REW ㉟ switch and hold it down for more than 1 second.
2. To move the pickup forward rapidly, hold down the FF switch ㉝.
3. To move the pickup backward rapidly, hold down the REW switch ㉟.
4. Release the button when you get to the desired position on the disc.
5. When the pickup reaches the end of the disc, it will begin playback from the beginning of the first track on the next disc.

REPEAT (One/All)

This feature allows you to continuously repeat a single track or one entire disc.

To Repeat a Single Track

1. Locate the music track of your choice using the UP ㉝ or DN ㉟ switch.
2. Press the REPEAT button ㉙.
   The RPT indicator ⑩ will illuminate, and "RPT ONE" indicator on the dot matrix display ⑦ will appear.
   The music track will be played back repeatedly.
3. To stop repeat play, press the REPEAT button twice. The "RPT OFF" indication on the dot matrix display ⑦ will appear.

To Repeat an Entire Disc

1. While playing a disc, press the REPEAT button ㉙ until the RPT ⑩ and ALL ⑮ indicators will illuminate.
2. The disc will be played back repeatedly.
3. To stop repeat play, press the REPEAT button ㉙ once. The indicator illumination will be off.

Disc Scan

Press the SCAN button ㉘ and the unit will playback the first 10 seconds of each track in succession. This function is useful in searching ahead on a disc for a specific selection. Pressing the SCAN button ㉘ a second time deactivates the function.

M.I.X. (Random Play)

Press the M.I.X. button ㉑ while the unit is in the play or pause mode. Musical tracks on the selected disc will be played back in a random sequence generated by the microprocessor. After all the tracks on the disc have been played back once, the player will begin a new random sequence.

Q.R.B. Minder

This unit is equipped with a built-in theft prevention reminder system. If the unit is not removed from the Quick Release Bracket after turning the ignition key off, a beeper will sound as a reminder to remove the unit.

Whether the ignition is on or off, the unit may beep when it is being removed from the dash.

You can switch the Q.R.B. Minder system on or off by the following.

1. Press the TUNE switch ㉞ for 3 seconds.
2. Press the Preset No. 4 button ㉗ to switch the display between "QRBM ON" and "QRBM OFF".

QRBM ON : Q.R.B. Minder is on.

QRBM OFF : Q.R.B. Minder is off.

NOTE:

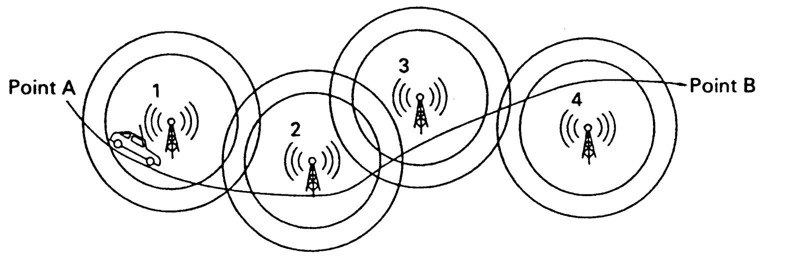
The unit is initially set with the Q.R.B. Minder system on. If the vehicle's engine does not start for over 2 seconds after turning the ignition key on, the Q.R.B. Minder system may be triggered.

GUIDE FOR RDS OPERATION

● R.D.S. METHOD

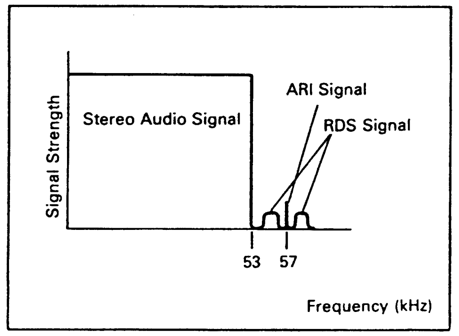
The R.D.S. (Radio Data System) is a broadcasting system in which digital data for automatic tuning, etc., on car radios is added to the FM radio signals.
Its standards are set by the E.B.U. (European Broadcasting Union).

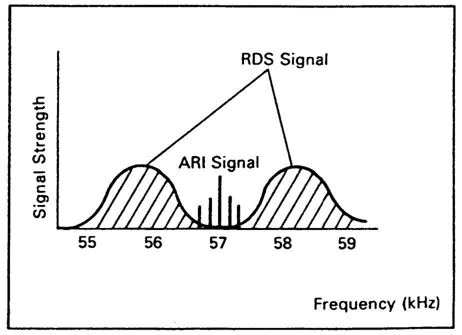
Automatic Tracing



To keep receiving the same broadcast when moving from point A to point B with the network shown above, it was previously necessary to tune in the next station (1 to 4) either manually or using the seek operation once the reception got bad.
The auto tuning system automatically switches the reception station to the station in the network offering the best reception.

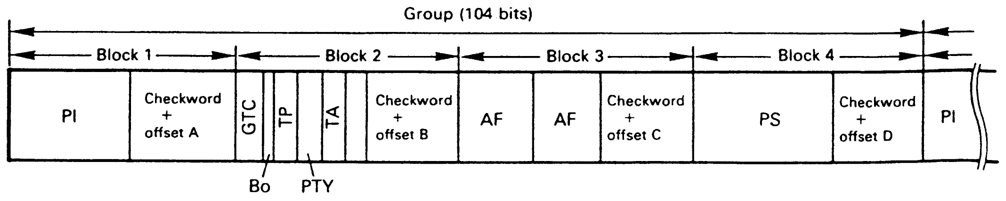
RDS Signal





The RDS data are transferred as shown above so that they do not give any influence on the sound signals.

RDS Data Structure (Sample of type 0A group)



Six Modes Setting Function

This unit allows setting of six modes shown below. Press the TUNE switch ㉞ for 3 seconds, and press any one of the Preset buttons (㉒ — ㉗). For further details, refer to each mode described in the Owner's Manual and RDS Manual.

- FM level switching.
- Sound volume setting during reception of traffic information.
- Operation switching when a traffic information station is not received.
- Operation switching for Q.R.B. Minder.
- Switching of automatic tracing function. (API-1/API-2)
- Built-in lighting switching function (amber/green).

The RDS data used are the PI, PS, AF, TP, TA and EON data.

PI:	Program Identification code Code identifying programs and consisting of a country code and a program code.
PS:	Program Service name Broadcast station name data expressed in alphanumerical characters of up to 8.
AF:	Alternative Frequencies Frequency list data for broadcasting stations transmitting the same program.
TP:	Traffic Program identification Identification data for traffic information broadcasting station.
TA:	Traffic Announcement identification Identification data showing traffic information is being transmitted or not.
EON:	Enhanced Other Networks Information Broadcasting information on PI, AF, TP, TA, etc. relating to networks other than the network used for current reception.

RDS Function on the 7618R

The RDS data is used for the following operations:

- Auto tuning to the station in the network with the best reception is performed using the PI and AF data.
- The station name is displayed using the PS data.
- Traffic information is received automatically using the TP and TA data.

● A.P.I. (AUTO PROGRAM IDENTIFICATION) OPERATION

1. Press the TUNER/BAND button ㉜ to set the FM mode. (The A.P.I. function does not operate on the MW and LW bands.)
2. Press the A.P.I. button ①. The A.P.I. indicator ⑥ appears on the display.
3. Press the TUNE switch ㉞ to set the seek mode. (The SEEK indicator ⑲ appears on the display.)
4. Press the UP or DN switch (㉝ or ㉟) to start tuning.
   Once the station is tuned in, the RDS indicator ⑨ appears on the display.
   After approximately 1 second, the display switches from the frequency to the station name.
   (If the reception is poor, more time is required for the station name to appear.)
5. When the reception of the station last tuned in becomes poor, the set automatically switches to another frequency broadcasting the same program with better reception. (The automatic follow operation does not function in areas where there is no broadcast network.)
6. Press the A.P.I. button ① to cancel the A.P.I. mode.
   The A.P.I. indicator ⑥ on the display turns off, and the station display switches back to the frequency display.

NOTES:

1. With the A.P.I. button ① in the on position, reception of an RDS station (indicated by the station name display and the lighting of the RDS indicator) will result in automatic tracing of stations having the same broadcast contents.
2. When the A.P.I. button ① is left on in the seek mode, the radio will also stop at non-RDS stations, but the display will continue to show a frequency.

● API-1/API-2 MODE

This unit has employed two modes of API-1/API-2 as automatic tracing systems, so use one of the modes depending upon status of broadcasting networks, reception status, and other environment.

1. Press the TUNE switch ㉞ for 3 seconds.
2. Press the Preset No. 5 button ㉕ to switch between API-1 to API-2.

[API-1] Mode

- When the reception status becomes poor, the unit is automatically switched to a station which provides good reception status.

NOTE:

Under certain conditions of broadcasting stations, the unit will be switched to another program station for an instant time of period.

[API-2] Mode

- If erroneous operation occurs with API-1 mode selected, switch the mode to the "API-2" mode.

NOTES:

1. When switching from a station which provides poor reception condition to the other station which provides good condition, the MUTE function works for an instant period to check whether the switched station is the same station.
2. When moving from the station providing poor reception condition to a good station, the MUTE function successively works for a specified interval if a station providing good reception condition does not exist. In such a case, turn off the API or try to tune in another station.

● OTHER CONVENIENT FUNCTIONS

Setting the PI in the Preset Memory

1. Tune in an RDS station and set the display to the station name display.
2. Press one of preset buttons 1 to 6 for two seconds.
3. The station name flashes for 5 seconds. Press the preset button at which you want to store the PI while the display is flashing. The PI is now stored in the memory.
4. Set other preset buttons in the same way.

- If a preset button at which a PI is stored is pressed, the station name will be displayed.
- If a preset button at which a PI is stored is pressed and a station broadcasting the same program cannot be received, "PI SEEK" appears on the display after 2 seconds and the set searches for a station broadcasting the same program.
- If a station broadcasting the same program cannot be tuned in, reception returns to the original frequency and the preset indicator turns off.

● REGIONAL PROGRAM OPERATION

Some broadcast stations will change from normal broadcasting to regional broadcasting for a certain time period. PI area code will change when the normal broadcasting is switched to the regional broadcasting. This operation allows selection of the function which moves to the regional station or remains in the normal broadcasting.

1. Push the A.P.I. button for more than 2 seconds and the dot matrix display shows REG. ON or REG. OFF.
2. Push the A.P.I. button within 2 seconds after the display of the dot matrix, and the REGIONAL ON, OFF operation will be made.

REG. ON ←——→ REG. OFF

Moves to Regional Station.

Normal Station

RDS auto memory function

Six RDS stations can be stored in the preset memory in order according to the best reception conditions.
Set to the RDS station reception mode.
Press the TUNE switch ㉞ to set the A.MEMO mode, then press the UP or DN switch (㉝ or ㉟) to start the auto memory operation.

CAUTION:

The PI and PS data stored in the memory are cleared when the auto memory function is used, so set them in the memory once again.

● TRAFFIC INFORMATION FUNCTION

With this function, traffic information can be received automatically from any mode. This function operates using the RDS TP and TA signals or the ARI SK and DK signals.

Traffic information being broadcasted through other network can be received by using EON signal.

To receive traffic information:

1. Press the TUNER/BAND button ㉜ to set the FM mode. (The traffic information function does not operate on the MW and LW bands.)
2. Press the T. INFO button ②. The T.INFO indicator ⑤ appears on the display.
   The TP indicator ㊷ lights when a traffic information station is received regardless of the traffic information mode.
3. Press the TUNE switch ㉞ to set the seek mode. (The SEEK indicator ⑲ appears on the display.)
4. Use the UP or DN switch (㉝ or ㉟) to start searching.
   The set automatically searches for a traffic information station.
   Once the station is tuned in, the TP indicator ㊷ appears on the display.
5. The following appears on the display when traffic information is received:

TRF - INFO

NOTE:

When a reception signal strength is poor during the traffic information reception, the function which holds the traffic information reception mode works for 1 minute.

If no information is received for 1 minute, the traffic information reception mode is automatically cancelled and the unit returns to the original mode. If a traffic information termination signal is received during the hold period, the unit also returns to the original mode.

6. If traffic information is received while a cassette is playing, the cassette is automatically paused and the traffic information can be heard. Once the traffic information is over, the set returns to the previous mode.

GUIDE FOR RDS OPERATION

7. If traffic information is received when the volume control is set at the minimum, the volume is automatically set to the preset level while the traffic information is being received.

   Four preset volume levels can be set for traffic information reception

   (1) Press the TUNE switch ㉞ for 3 seconds.
   (2) Press the Preset No. 2 button ㉔ to switch between TA-LV 4 to TA-LV 1. Select the desired level.

   TA - LV 1

8. When the reception of the broadcast station currently tuned in becomes poor, the TP indicator ㊷ turns off and the set is set to the following state:

   (1) An alarm is sounded after traffic information stations can no longer be received (the TP indicator ㊷ turns off).
   If a cassette is playing, it is paused automatically and the alarm is sounded.
   (2) Use the manual tuning, seek, or auto memory functions to tune in another station.
   (3) When the set is in the seek mode, if the UP or DN switch (㉝ or ㉟) is pressed, the set only searches for traffic information stations. It either finds a traffic information station or continues searching until the seek mode is canceled.

9. To search only for traffic information stations:

   (1) Press the TUNE switch ㉞ for 3 seconds.
   (2) Press the Preset No. 3 button ㉒.
   The display switches between "TP SEEK" and "TP ALARM" each time the Preset No. 3 button ㉒ is pressed.

   TP - SEEK ↔ TP - ALARM

   (3) Set the display to "TP SEEK" and press the TUNE switch ㉞.

   - In this mode, the set automatically searches for the traffic information station with the best reception in that area after the traffic information station can no longer be received (after the TP indicator ㊷ turns off).
   - When traffic information stations cannot be received, the previous station is tuned back in. This operation is performed again if traffic information signals can no longer be received. If traffic information is selected, the set may re-tune to a different station broadcasting other programs.
   - Traffic information stations are automatically tuned in even during playback of a cassette.

10. The set operates as follows if both the traffic information and A.P.I. modes are set:
    The automatic follow operation is performed for stations broadcasting the same program which are also traffic information broadcast stations.

    When traffic information stations cannot be received:
    In the alarm mode:
    An alarm is sounded after traffic information stations can no longer be received.
    If a cassette is playing, it is paused automatically, the alarm is sounded, and the radio mode is set.
    Use the manual tuning, seek, or auto memory functions to tune in another station.
    In the seek mode:
    The set automatically searches for RDS stations which are also traffic information broadcast stations. In this case, it searches for stations broadcasting other programs.

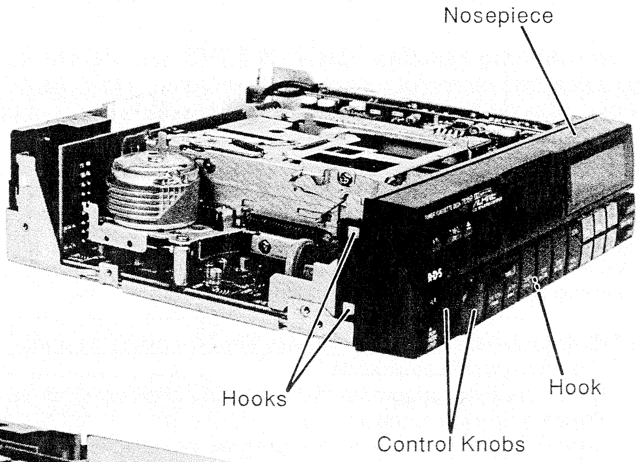
11. If you no longer want to hear traffic information, cancel the traffic information mode to return to normal radio reception.

Disassembly Instructions

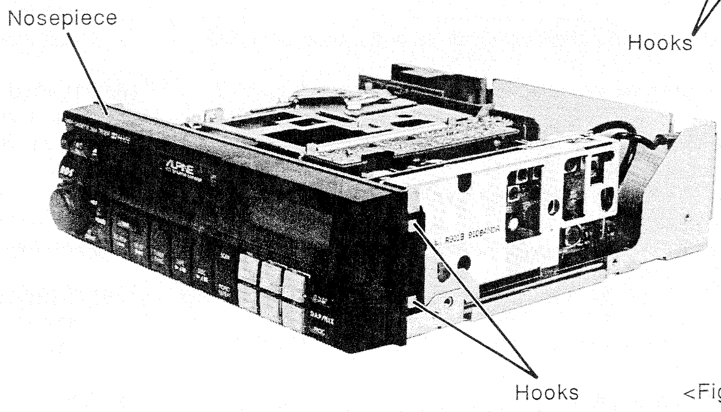
1. Removal of Nosepiece

(1) After removal of Top Cover, remove two Control Knobs (Volume, Contrast) as shown in Figure 1.

(2) Remove five Hooks as shown in Figures 1 and 2.


Nosepiece
Hooks
Hook
Control Knobs

<Figure1>

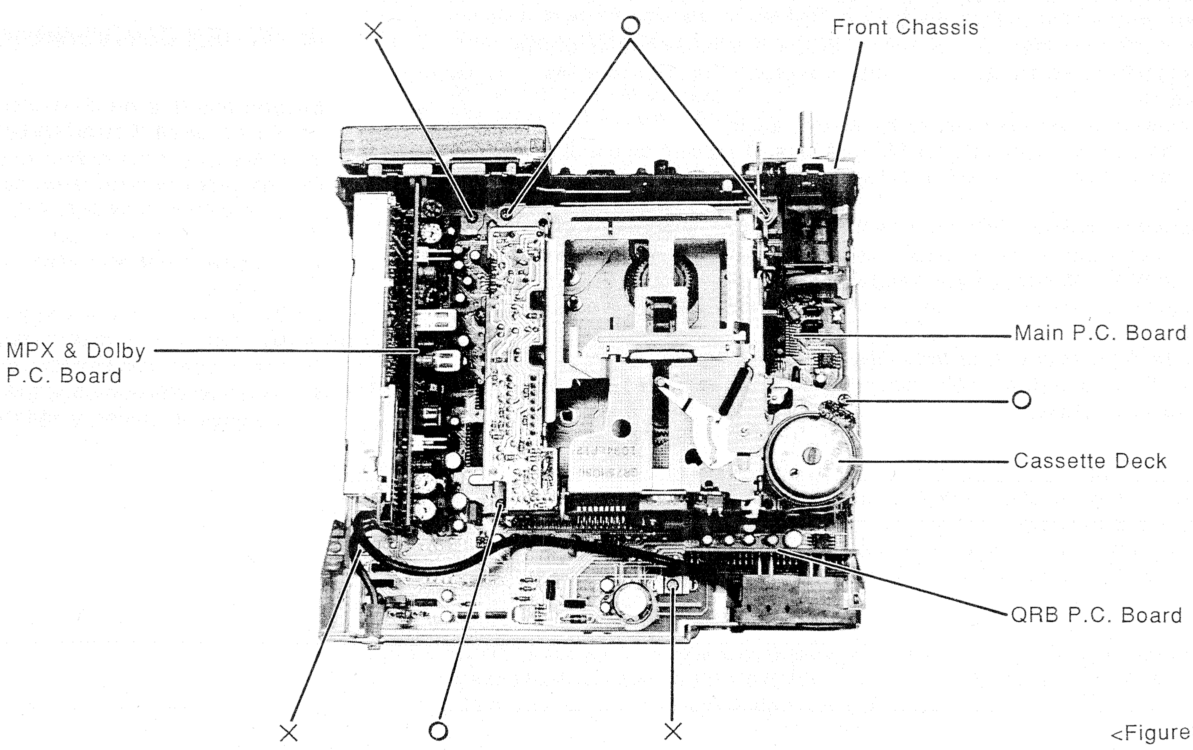

Nosepiece
Hooks

<Figure2>

2. Removal of Cassette Deck

(1) After removal of Nosepiece, remove four screws marked "○" as shown in Figure 3.

(2) Disconnect a connector from the Cassette Deck.


×
○
Front Chassis
MPX & Dolby P.C. Board
Main P.C. Board
○
Cassette Deck
QRB P.C. Board
×
○
×

<Figure3>

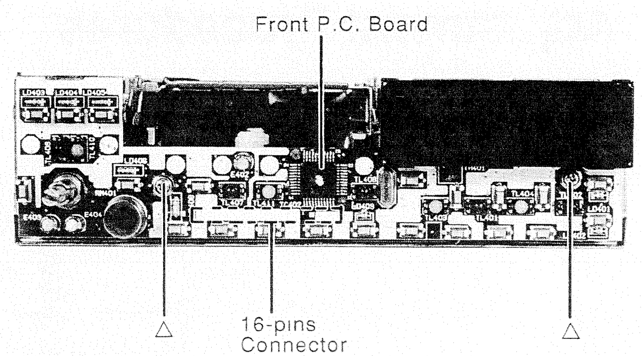
3. Removal of Front P.C.Board

(1) After removal of Cassette Deck, remove two screws marked "△" as shown in Figure 4.

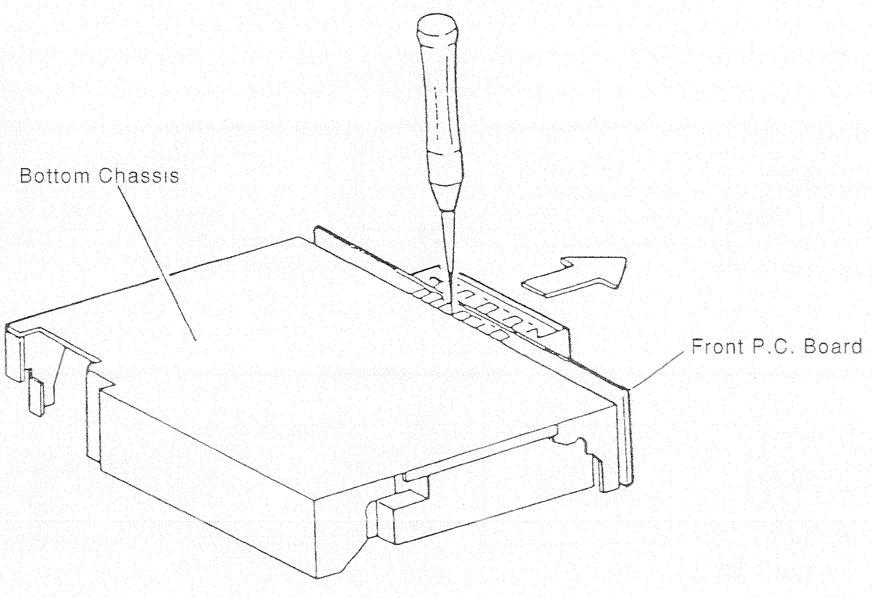
(2) Disconnect the 16-pins Connector from the Front P.C.Board.

※ To make it easy, insert a thin stick object into an aperture and push out the Front P.C.Board as shown in Figure 5.

Then the Front P.C.Board will be removed with Main P.C.Board.


Front P.C. Board
△
16-pins Connector
△

<Figure4>

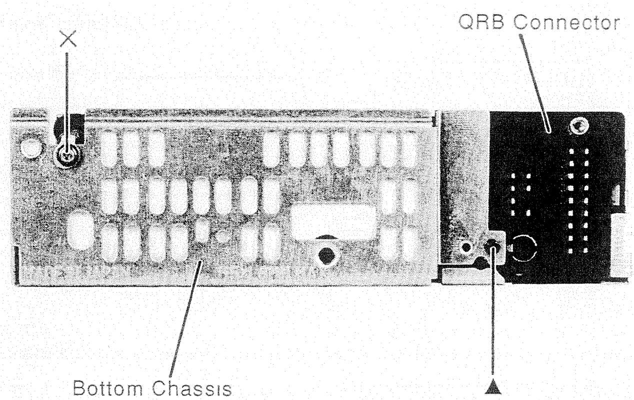

Bottom Chassis
Front P.C. Board

<Figure5>

4. Removal of QRB P.C.Board

(1) After removal of Front P.C.Board, remove a screw marked "▲" as shown in Figures 6.

(2) Disconnect all connectors from Main P.C.Board.


×
QRB Connector
Bottom Chassis
▲

<Figure6>

5. Removal of Main P.C.Board

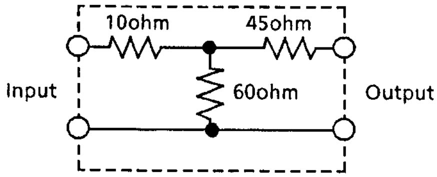
(1) After removal of Front and QRB P.C.Boards, remove four screws marked "×" as shown in Figures 3 and 6.

(2) Main P.C.Board with Front Chassis can be removed completely.

Adjustment Procedures

1 FM SECTION

(1) Dummy Antenna Circuit


10ohm
45ohm
60ohm
Input
Output

For 50 ohm FM Signal Generator

Figure 7

(2) Connections

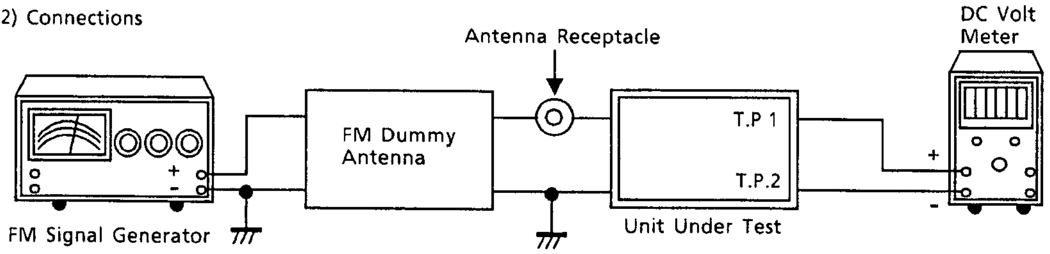

Antenna Receptacle
DC Volt Meter
FM Dummy Antenna
T.P 1
T.P.2
+
-
Unit Under Test
FM Signal Generator

Figure 8

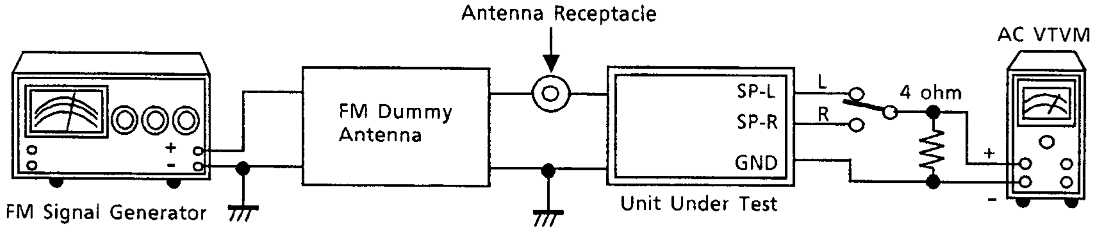

Antenna Receptacle
AC VTVM
FM Dummy Antenna
SP-L
SP-R
GND
L
R
4 ohm
+
-
Unit Under Test
FM Signal Generator

Figure 9

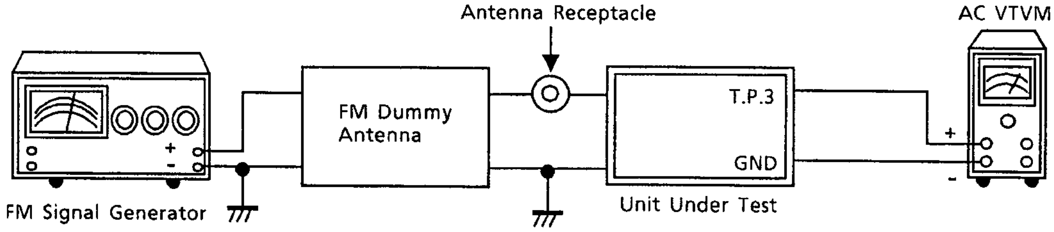

Antenna Receptacle
AC VTVM
FM Dummy Antenna
T.P.3
GND
+
-
Unit Under Test
FM Signal Generator

Figure 10

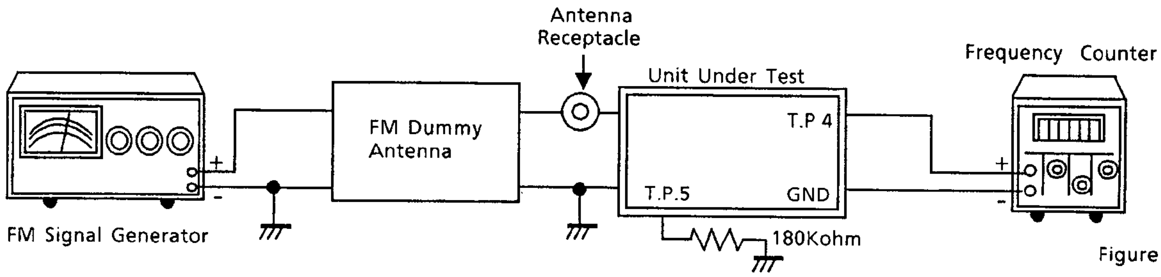

Antenna Receptacle
Frequency Counter
Unit Under Test
FM Dummy Antenna
T.P 4
T.P.5
GND
180Kohm
+
-
FM Signal Generator

Figure 11

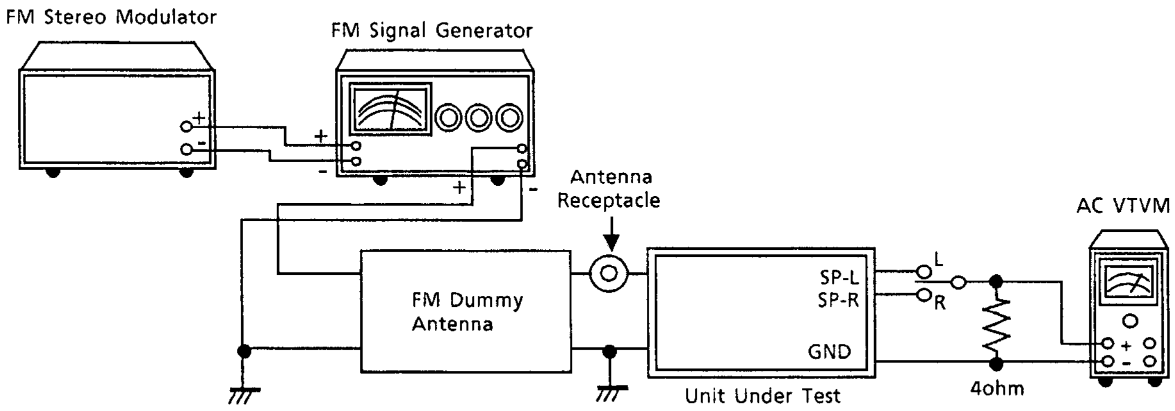

FM Stereo Modulator
FM Signal Generator
+
-
+
-
Antenna Receptacle
AC VTVM
FM Dummy Antenna
SP-L
SP-R
GND
L
R
+
-
Unit Under Test
4ohm

Figure 12

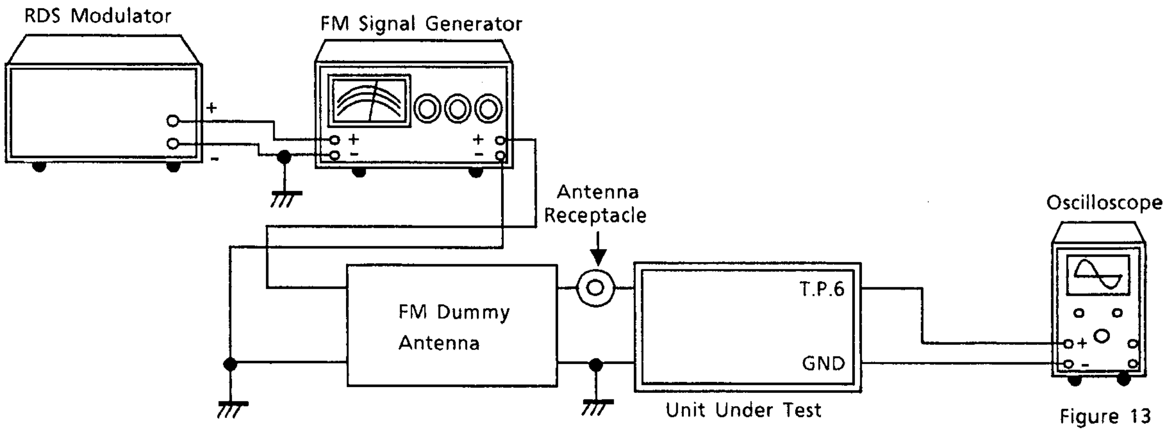
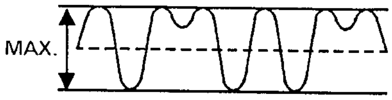

RDS Modulator
FM Signal Generator
+
-
+
-
+
-
Antenna Receptacle
Oscilloscope
FM Dummy Antenna
T.P.6
GND
+
-
Unit Under Test

Figure 13

(3) Control Settings

Power Switch	ON
Fader Control	Front
Balance Control	Mechanical Center
Treble / Bass Control	Mechanical Center
Band Switch	FM
Others	OFF

(4) Adjustment Procedures

Step	Description		Connection	Signal Generator	Dial Control	Test Point	Adjustment
1	IF Adjustment		Figure 8	98.1MHz, 72dB (Mod. OFF)	98.1MHz	T.P 1 T.P.2	T2101 for 0±30mV
2	Noise Level Adjustment	(1)	Figure 9	98.1MHz, 72dB (Mod. 400Hz, Dev. 22.5kHz)	98.1MHz	Speaker Output	Adjust VR204 (VOLUME) to obtain 2V output This value is 0dB.
		(2)	Figure 9	98.1MHz, - 19dB (Mod. 400Hz, Dev. 22.5kHz)	98.1MHz	Speaker Output	Adjust VR2102 to 35±5dB output at SG level minimum.
3	Seek Stop Adjustment		Figure 10	98.1MHz, 27dB (Mod. 400Hz, Dev. 22.5kHz)	98.1MHz	T.P.3	Adjust VR2101 to obtain 27±5dB at T.P.3 output.
4	VCO Adjustment		Figure 11	98.1MHz 72dB (Mod. 400Hz, Dev. 22.5kHz)	98.1MHz	T.P 4	Adjust VR003 to read 19±0.05KHz on Counter at T.P 4.
5	Stereo Separation Adjustment (Lch)		Figure 12	98.1MHz 72dB (Stereo Mod, Lch, only)	98.1MHz	Speaker Output	Adjust VR002 for Rch output to be minimum, and confirm Lch and Rch output level difference is more than 25dB.
6	Stereo Blend Adjustment (Lch)		Figure 12	98.1MHz 46dB (Stereo Mod, Lch, only)	98.1MHz	Speaker Output	Adjust VR006 for Lch and Rch output level difference to be 8dB.
7	Stereo Separation Adjustment (Rch)		Figure 12	98.1MHz 72dB (Stereo Mod, Rch, only)	98.1MHz	Speaker Output	Proceed same adjustment under step 5 by alternating Lch and Rch.
8	Stereo Blend Adjustment (Rch)		Figure 12	98.1MHz 46dB (Stereo Mod, Rch, only)	98.1MHz	Speaker Output	Proceed same adjustment under step 6.
9	RDS (Sencitivity) Adjustment		Figure 13	98.1MHz, 72dB (RDS ON, Mod 0.4%)	98.1MHz	T.P.6	Adjust VR005 so that the waveform of oscilloscope becomes maximum as shown in figure below. 

2 TAPE PLAYER SECTION

(1) Connections

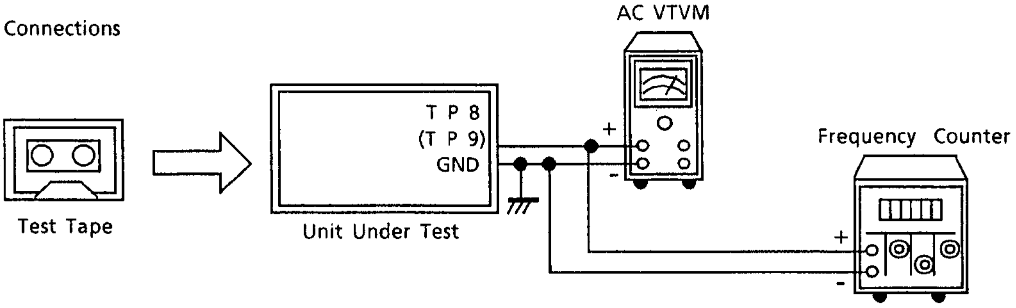


Figure 14

(2) Control Settings

Power Switch	ON
Fader Control	Front
Balance Control	Mechanical Center
Treble / Bass Control	Mechanical Center
Others	OFF

(3) Adjustment Procedures

Step	Description	Test Tape	Connection	Test Point	Adjustment Point	Adjustment
1	Head Azimuth Adjustment	MTT-114NB (14KHz)	Figure 14	T.P.7 (Lch) T.P.8 (Rch)	Head Azimuth Adjustment Screws (Figure 15)	Adjust for Max. and same level output at Normal and Reverse positions.
2	Dolby Level Adjustment	MTT-150 (400KHz)	Figure 14	T.P.7 (Lch) T.P.8 (Rch)	VR101 (Lch) VR102 (Rch)	Adjust for 388 ± 10mV at T.P.7 (Lch) and T.P.8 (Rch).
3	Tape speed Adjustment	MTT-111N (3KHz)	Figure 14	T.P.7 (Lch) or T.P.8 (Rch)	Tape Speed Adjustment (Figure 16)	Adjust for 2,970 to 3,090Hz at T.P.7 (T.P.8).

Adjustment Locations

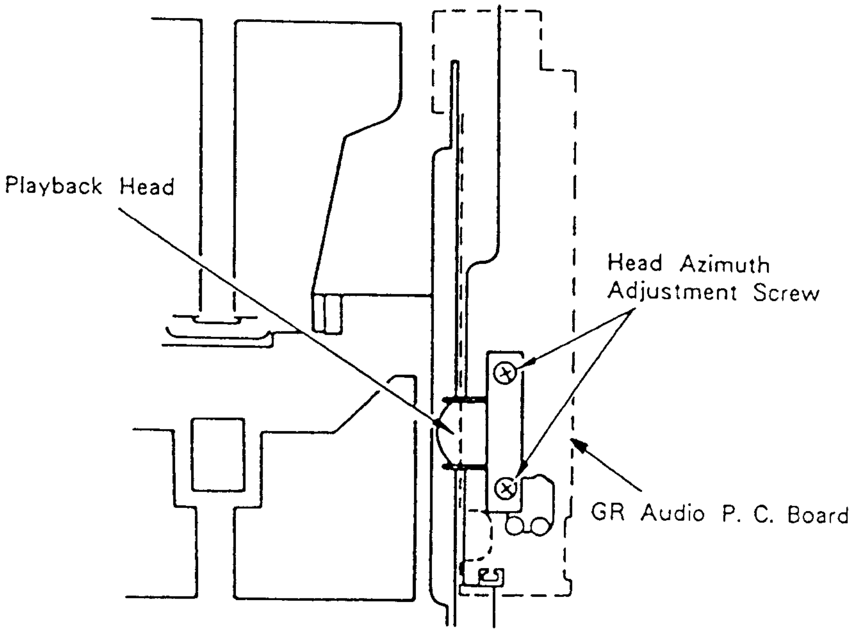

Playback Head
Head Azimuth Adjustment Screw
GR Audio P. C. Board

Figure15

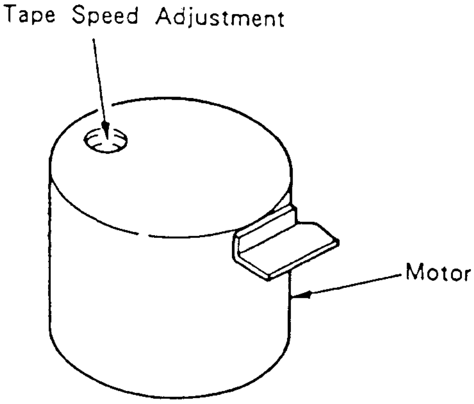

Tape Speed Adjustment
Motor

Figure16

FM/MW/LW Tuner Unit FE001

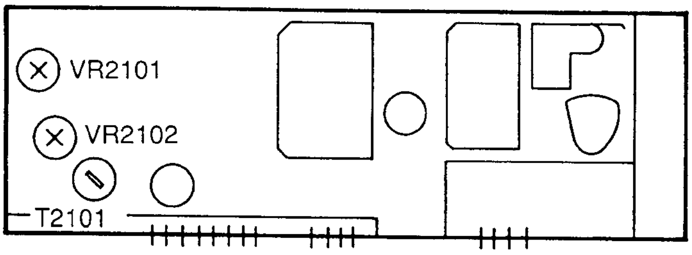
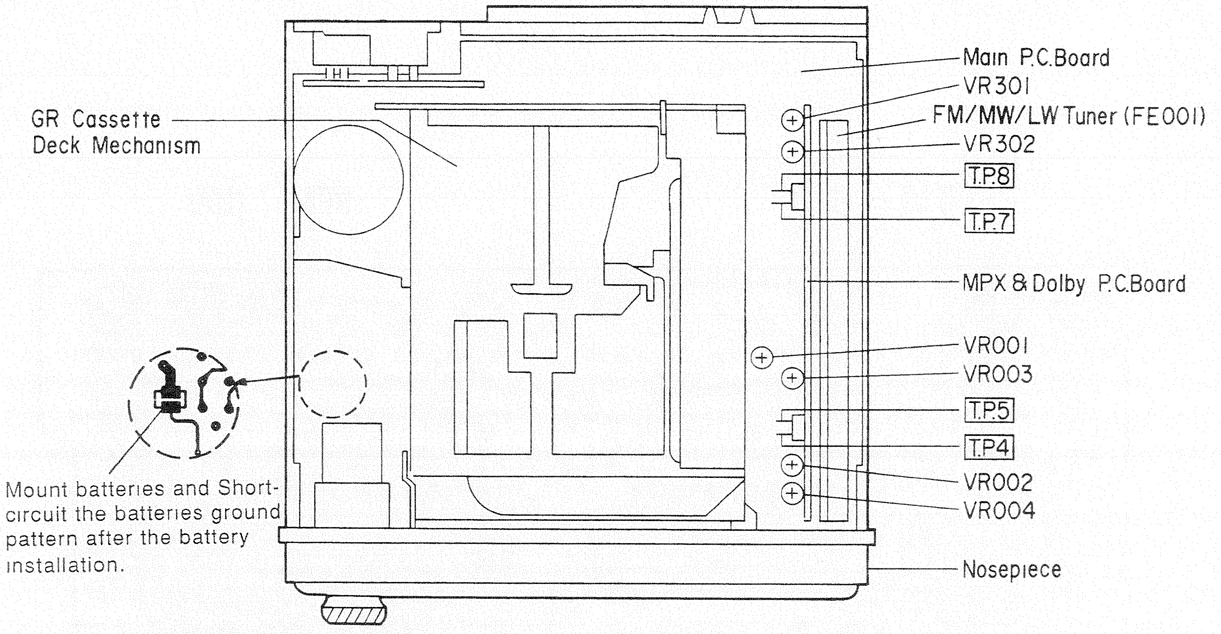
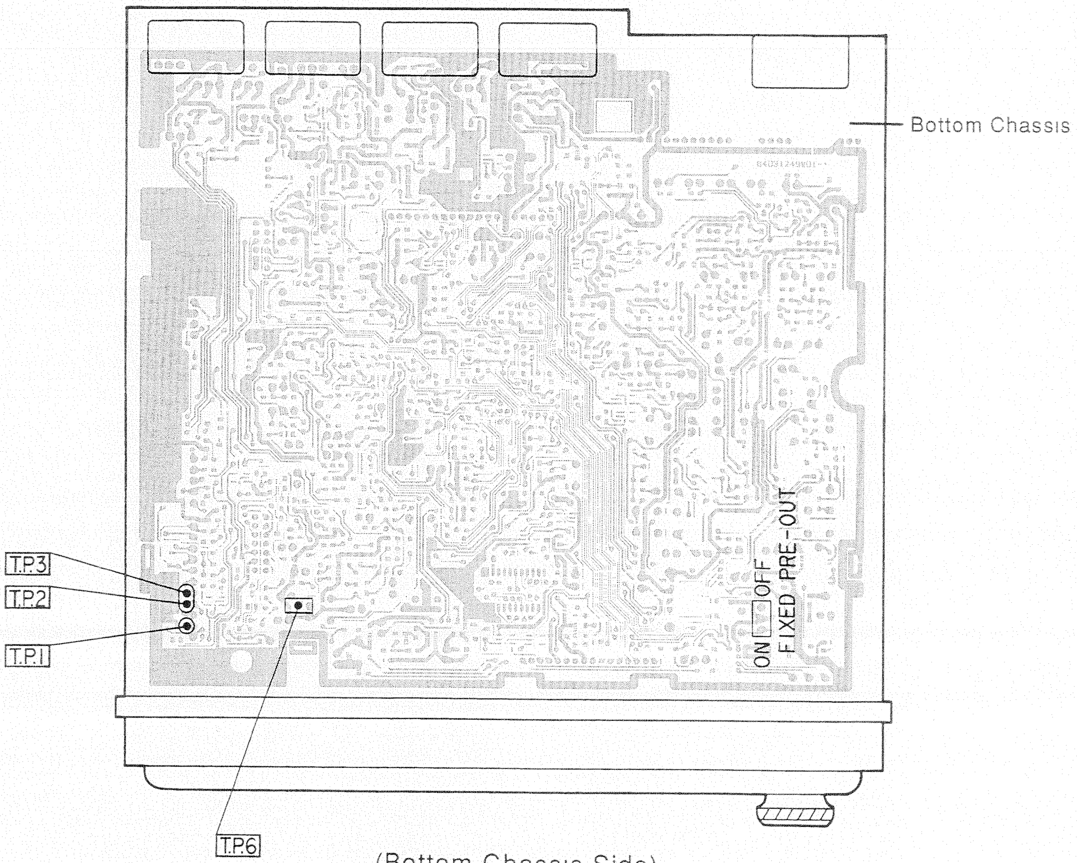

VR2101
VR2102
T2101

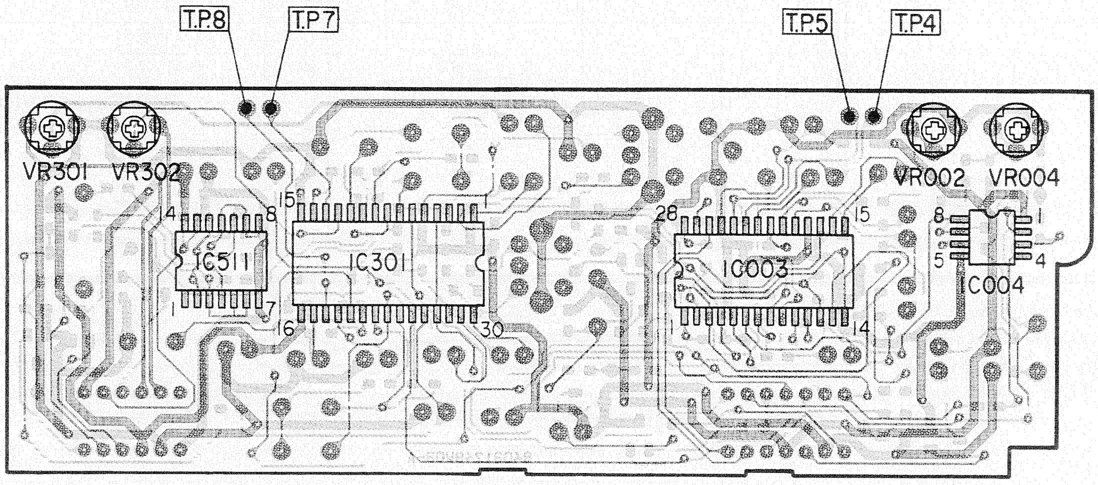
Figure17


GR Cassette Deck Mechanism
Main P.C.Board
VR301
FM/MW/LW Tuner (FE001)
VR302
T.P.8
T.P.7
MPX & Dolby P.C.Board
VR001
VR003
T.P.5
T.P.4
VR002
VR004
Nosepiece

Mount batteries and Short-circuit the batteries ground pattern after the battery installation.


Bottom Chassis
T.P.3
T.P.2
T.P.1
T.P.6
ON
OFF
FIXED
PRE-OUT

(Bottom Chassis Side)


T.P8
T.P7
T.P5
T.P4
VR301
VR302
VR002
VR004
IC511
IC301
IC003
IC004
14
8
1
7
15
16
30
28
15
1
14
8
1
5
4

MPX & P. C. Board (Component Side)

Electrical Inspection Specification

1. Measuring Conditions

(1)	Power Supply	DC14.4 ± 0.2V
(2)	Load Impedance	Pre Out 10k ohm
(3)	Power Output	0.5V (FM. TAPE), 0.2V (MW/LW), 1.2V (CD)
(4)	Signal Generator Output	SG Indication (SG of OPEN Indication)

(5) Control Settings

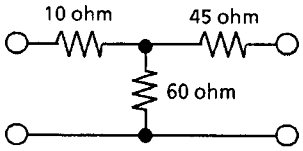
Fader	—	Front Position
Balance	—	Center position
Treble	—	Center Position
Bass	—	Center Position

(6) Standard Modulations

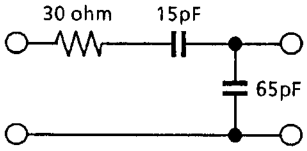
(FM)	Mono	400Hz 22.5kHz Deviation	(MW/LW)	30% 400Hz
	Stereo	1kHz 22.5KHz Deviation		
	Pilot	8%		

(7) Dummy Antenna

FM



MW/LW



2. FM Inspection

Step	Item		SG				Spec.
			f (MHz)	Input(dB)	Mod.	ST	
1	Usable Senstitvity		90.1	18	ON/OFF	OFF	S/N more than 30dB
			106.1	18	ON/OFF	OFF	S/N more than 30dB
2	Stop Level (DX)	To be not Stopped	98.1	21	ON	OFF	
		To be Stopped	98.1	32	ON	OFF	27 ± 5dB
	Stop Level (LOC)	To be not Stopped	98.1	46	ON	OFF	
		To be Stopped	98.1	67	ON	OFF	57 ± 10dB
3	Distortion		98.1	72	ON	OFF	less than 1%
4	Stereo Separation		98.1	72	ON	ON: 1kHz Lch only	more than 25dB (IHF T-200)
5	Stereo Blend		98.1	43~49	ON	ON: 1kHz Lch only	8dB
7	Hi-Cut		98.1	36	ON	ON 10kHz	more than -3dB more

Step	Item		SG				Spec
			f (MHz)	Input(dB)	Mod.	ST	
8	TONE Control	TREBLE (10kHz)	98.1	72	ON	OFF	MAX. +12±3dB
							MIN. -12±3dB
		BASS (30Hz)	98.1	72	ON	OFF	MAX. +15±4dB
							MIN. -15±4dB
9	Loudness	100Hz	98.1	72	ON	OFF	**LD** indicator should turned ON. Output should be increased (T.INFO Pushed for 3 sec.)

3. MW Inspection

Step	Item		SG			Spec
			f (kHz)	Input(dB)	Mod.	
1	Usable Sensitivity		999	34	ON / OFF	S / N more than 20dB
2	Stop Level (DX)	To be not Stopped	999	23	ON	
		To be Stopped	999	44	ON	34±10dB
	Stop Level (LOC)	To be not Stopped	999	42	ON	
		To be Stopped	999	86	ON	L / D 30±12dB
3	Distortion		999	74	ON	less than 1.5%
4	Level difference from FM level		999	74	ON	-2±3dB

4. LW Inspection

Step	Item		SG			Spec
			f (kHz)	Input(dB)	Mod.	
1	Usable Sensitivity		216	41	ON / OFF	S / N more than 20dB
2	Stop Level (DX)	To be not Stopped	216	23	ON	
		To be Stopped	216	44	ON	34±10dB
	Stop Level (LOC)	To be not Stopped	216	24	ON	
		To be Stopped	216	86	ON	L / D 30±12dB
3	Distortion		216	74	ON	less than 1.5%

5. SDK Inspection

Step	Item	SG				Spec
		f (MHz)	Input(dB)	Mod.	ST	
1	SK Sensitivity	98.1	26	ON	DK OFF SK, BK ON	less than 26dB
2	Alarm Check	98.1	72	ON	OFF	-6 ± 4dB
3	Cut In Output Check	98.1	72	ON	ON SK, BK, DK ON	10mV ± 3dB with Volume Minimum. (T INFO ON)
4	Tape Pause Check	98.1	72	ON	ON SK, BK, DK ON	Should be pause with pac Inserted.
5	T.INFO SEEK Check	98.1	72	ON	OFF SK, BK, DK ON	To be Stopped with **T. INFO** ON.
					OFF SK, BK, DK OFF	To be not Stopped with **T. INFO** ON.

6. RDS Inspection

Step	Item	SG				Spec
		f (MHz)	Input(dB)	Mod.	ST	
1	Auto Follow Check	98.1	72 30	ON	RDS - ON ST - Lch only	Turn the **A.P.I.** switch on and confirm that the station name is displayed. After approximately 5 seconds, decrease - 20dB by turning the attenuator on and ensure that the output is available at the L channel only.
		98.1	72			
2	T INFO Check TAPE PAUSE Check	98.1	72	ON	OFF TP, TA ON	
3	FM Level Check	98.1	72	ON	OFF SK, BK, DK OFF	Press the tune switch for 2.5 seconds and ensure that when the preset 1 is turned on " FM - LV H " is displayed, and after this display " FM - LV L " will be displayed and the output reading is - 6 ± 3dB when the preset 1 is turned on again.
4	Alarm / Seek Changeover Check (TP OFF)	98.1	72	ON	OFF SK, BK, DK OFF	Display " TP - ALARM " by turning on the preset 2 and turn on the preset 2 again to display " TP SEEK ", then adjust to obtain " 106.1 " display and confirm that the seek operation starts approximately 3 seconds after the tune switch is turned on.

7. TAPE Inspection

Step	Item		Test Tape	Spec
1	S/N		MTT-212N	JISA FILTER more than 52dB
2	Separation		MTT-141N	NOR L only REV R only more than 30dB 1kHz B.P.F
3	Frequency Response		MTT-256	High more than -3dB
				Low more than -3dB
4	Wow & Flutter		MTT-111N	less than 0.2%
5	M S operation	To be Stopped	ITT-610	**M.S.** indicator should be turned on.
		To be not Stopped	ITT-607E	
6	DOLBY Operation B type		C-60 (No Recoading)	DD indicator should be tuned on. Output should be decreased.
7	PRE OUT Output		MTT-212N	more than 1V
8	Distortion		MTT-118N	less than 2%
9	Level difference from FM Level		MTT-212N	5±3dB
10	Crosstalk		MTT-121N	1kHz B.P.F more than 45dB

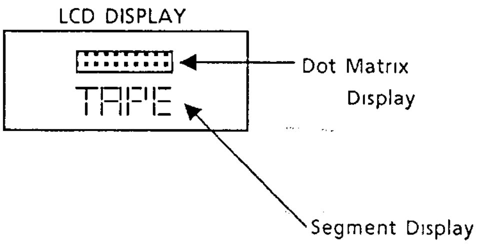
8. BATTERY (BA501) Inspection

Step	Item	Spec
1	Voltage Check	more than 2.9V
2	Cautions on battery installation	Mount batteries and short-circuit the battery ground pattern and then allow a current to flow for more than 2 seconds within 10 minutes after the battery installation.

Operation Check

1 Radio Operations

(1) Push all key switches other than the **RESET** Switch and **EJECT** switch and make sure the power is turned on.
(2) To be changed in order of FM1→FM2→MW→LW, each time the **TUNER/BAND** key is pushed.
(3) To be changed in order of SEEK→A. MEMO→Manual SEEK, each time the **TUNE** key is pushed.
(4) Check SEEK and Manual SEEK operations using **UP/DN** keys.
(5) Check Preset status with keys 1 to 6.
(6) Push the **A.P.I** key over 2sec. shows on Dot Matrix Display.
(7) Push **T.INTO** key for 2sec **DX** indicator should be turned off.
(8) **MONO** key on **MONO** indicator should be turned on.
(9) Push the **PROG** key FM/AM can be memorized at randomly with the **PROG** key for each mode.
(10) Check Auto Memory operation.
(11) To be changed in order of TREBLE→BASS→BALANCE→FADER→VOLUME, each time Rotary Volume is pushed.
(12) Check Power Antenna operation.



2. Tape Operations

(1) After insertion of a tape, check the Dot Matrix Display shows **LOAD** and then " >> " lights up and moves. At the same time, also check the Segment Display shows **TAPE** and " ▶"
(2) Confirm FF/REW Push the **FF/REW** key and check the Dot Matrix Display shows **FF/REW** and then, " >> " or " << " moves rapidly and the "▶" or "◀" is blinking.
(3) Confirm program. Push the **PROG** key on and check the Dot Matrix Display indicates **PROGRAM** and then, " >> " and "▶" change to " << " and "◀"
(4) Push the **TAPE** key on and check the unit enters the pause status. Also check the Dot Matrix Display shows **PAUSE** and the Segment Display shows "   "
(5) Push the **R. MONI** key on and check the Dot Matrix Display turns off after indication of **R. MONI**. Push the **FF/REW** key and check the Segment Display shows a receive frequency and the radio output is obtained.
(6) Push the **PS. UP/PS. DN** key on and check MS, and programs are switched up to +9 music/-9 music.
(7) Push the "⏏" key on and check the Dot Matrix Display shows **EJECT** and then the tape is ejected.
(8) Push the **D.DISP** key over 3sec. Mark of " >> " or" << "shows on Dot Matrix Display. Push the **D.DISP** key again, turn off this mark.

3. Combination with CD shuttle

(1) Push the **DISC** key on and check the Dot Matrix Display shows DISC and the Segment Display shows "01000", and the CD starts to play.
(2) Check up and down of the track numbers and **MS UP** and **MS DOWN** on the Dot Matrix Display with the **FF/REW** switch.
(3) Keep to push the **FF/REW** switch and make sure the time display appears. Also make sure the FF and REW operation and the Dot Matrix Display shows **FORWARD/BACKWARD.**
(4) Check the DISC switching with Keys **1** to **6**. At the same time, also check the Dot Matrix Display shows **DISC-1 ~ DISC-6** and then turns off.
(5) Push the **PROG** key on and check the Segment Display shows **M.I.X.** and program order becomes at random. Also check the Dot Matrix Display shows **MIX** and then turns off.
(6) Push the **DISC** key on and check the Dot Matrix Display shows **PAUSE** and operation is made correctly
(7) Check the player enters **PLAY** mode when **DISC** key is on again.
(8) Turn **TAPE** or **TUNER** key on and make sure the CD player enters PAUSE mode and the unit enters TAPE or TUNER mode.
(9) Push the **SCAN** key on and check SCAN on the Dot Matrix Display is blinking and the SCAN operation is performed correctly.
(10) Push the **REPEAT** key on and check the Dot Matrix Display shows **RPT ONE**, the Segment Display shows **REPEAT**, and the operation is made correctly.
(11) Push the **REPEAT** key again and check the Dot Matrix Display shows **RPT ALL**, the Segment Display shows **REPEAT ALL**, and the operation is made correctly.
(12) Play back 9th program on A. BEX TEST CD TCD-782. Output Lch only.
(13) Play back 11th program on A. BEX TEST CD TCD-782. Output Rch only.

4. Other Operations

(1) Set TREBLE/BASS separately for each mode (FM, AM, TAPE, CD Shuttle) and check the TREBLE/BASS value set for each mode is memorized by using the mode switch.
(2) Push the **D. DISP** key on and check the Dot Matrix Display shows the ALPINE message.
(3) Adjust the CNTRST knob and make sure the visible angle angle of the Dot Matrix Display varied, and then place the knob at its center position.

Description of IC Terminals

• 16615W16 : IC402

No.	Symbol	I/O	Terminal Description
1	KEY R1	I	Key-matrix signal input terminal.
2	KEY R2	I	Key-matrix signal input terminal.
3	KEY R3	I	Key-matrix signal input terminal.
4	KEY S0	O	Key-matrix signal output terminal.
5	KEY S1	O	Key-matrix signal output terminal.
6	KEY S2	O	Key-matrix signal output terminal.
7	KEY S3	O	Key-matrix signal output terminal.
8	KEY S4	O	Key-matrix signal output terminal.
9	POWER ON	I	Power supply control for remote control.
10	NC	O	Pull down.
11	NC	O	Pull down.
12	NC	–	Pull down.
13	DATA	O	Serial data signal output to LCD driver.
14	CLK	O	Serial communication sync signal output to LCD driver.
15	CE	O	Serial data sync signal output to LCD driver.
16	$\overline{\text{INH}}$	O	Display on/off signal output terminal for LCD driver.
17	V_{SS}	–	GND potential terminal.
18	XT1	–	Crystal connection terminal for sub-system clock OSC. GND short.
19	XT2	–	Crystal connection terminal for sub-system clock OSC. Open.
20	$\overline{\text{RESET}}$	I	System reset input.
21	X1	–	Ceramic terminal for system clock OSC.
22	X2	–	Ceramic terminal for system clock OSC.
23	NC	–	Pull down.
24	NC	O	Pull down.
25	DATA	O	Serial data output to LCD driver.
26	$\overline{\text{CS}}$	O	Enables input for SCK and C/D terminals.
27	NC	–	GND short.
28	NC	–	GND short.
29	DIPS DATA	I	Indication data signal input from main microcomputer.
30	KEY DATA	O	Key data signal output to main microcomputer.
31	$\overline{\text{DISP CLK}}$		Communication sync signal input from main microcomputer.
32	NC	I	GND short.
33	$\overline{\text{BUSY}}$	I	Busy signal input terminal showing LCD driver is processing internally.
34	NC	–	Pull down.
35	CE	I	CE signal input from main microcomputer.
36	DISP REQ	I	Indication data sync signal input from main microcomputer.
37	REMO-CON	I	Remote control data input.
38	V_{DD}	–	Connect to V_{DD}
39	V_{DD}	–	Positive power supply.
40	$\overline{\text{C/D}}$	O	Command/data output for LCD driver.
41	CLK	O	System clock output for LCD driver.
42	RESET	O	Reset output terminal for LCD driver. Active High.
43	$\overline{\text{SCK}}$	O	Serial clock output terminal to LCD driver.
44	KEY R0	I	Key-matrix signal input.

• 25699W27 : IC501

No.	Symbol	I/O	Terminal Description
1	RD	O	CE$_1$ control terminal for S•RAM.
2	FM LEVEL	O	FM level ON/OFF terminal.
3	$\overline{\text{DTS MUTE}}$	O	Audio mute output terminal.
4	$\overline{\text{7071 RESET}}$	O	Control the reset for LC7071.
5	50KREF	O	High output when REF frequency becomes 50kHz in FM mode.
6	$\overline{\text{RESET}}$	I	System reset input terminal.
7	X2	O	Output terminal for system clock OSC.
8	X1	I	Output terminal for system clock OSC.
9	V$_{SS}$	–	GND terminal for device.
10	A15	O	CE$_2$ control terminal for S•RAM.
11	A14	O	CE$_2$ control terminal for S•RAM.
12 ~ 14	NC	–	Open.
15	AD10	O	Input/Output terminal for S•RAM address signal.
16	AD9	O	Input/Output terminal for S•RAM address signal.
17	AD8	O	Input/Output terminal for S•RAM address signal.
18	AD7	I/O	Input/Output terminal for S•RAM address signal.
19	AD6	I/O	Input/Output terminal for S•RAM address signal.
20	AD5	I/O	Input/Output terminal for S•RAM address signal.
21	AD4	I/O	Input/Output terminal for S•RAM address signal.
22	AD3	I/O	Input/Output terminal for S•RAM address signal.
23	AD2	I/O	Input/Output terminal for S•RAM address signal.
24	V$_{SS}$	–	GND terminal for device.
25	AD1	I/O	Input/Output terminal for S•RAM address signal.
26	AD0	I/O	Input/Output terminal for S•RAM address signal.
27	LE	O	LE control terminal for latch.
28	DTS STB	I	Return from standby to DTS.
29	CLOCK	I	Communication data sync signal input terminal from LC7071.
30	RDS DATA START	I	Data sync signal input terminal from LC7071.
31	DATA	I	Serial data input terminal from LC7071.
32	PLL DATA IN	I	Serial data input terminal.
33	AUDIO IN	I	Audio zero cross input terminal.
34	START	I	Command sync signal input from main microcomputer.
35	COMMAND	I	Serial data input terminal from main microcomputer.
36	NC	I	

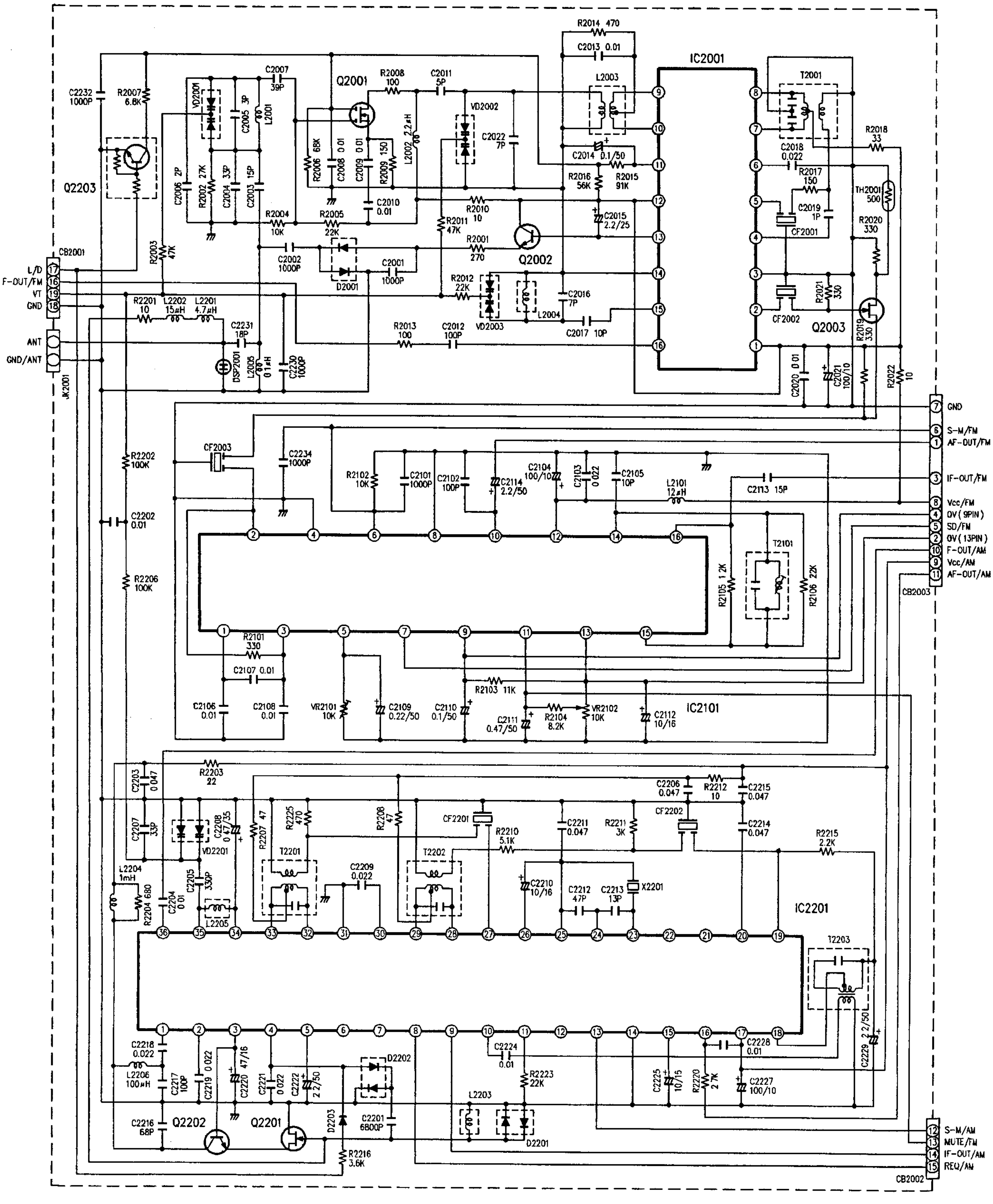
No.	Symbol	I/O	Terminal Description
37	NC	O	
38	DTS CLOCK	I	Communication data sync signal input terminal from main microcomputer.
39	STATUS	O	Serial data output terminal to main microcomputer.
40	EA	I	Power supply terminal.
41	V_{DD}	I	Power supply terminal for device.
42	AV_{SS}	–	GND terminal for A/D converter.
43	AV_{REF}	I	Reference Voltage input terminal for A/D converter.
44	ST	I	Stereo signal input terminal.
45	$\overline{\text{SK}}$	I	SK signal input terminal.
46	SEARCH	O	Search start level detector port.
47	MALTIPATH	I	Port detects multipath interference of station.
48	•$\overline{\text{ADJON}}$	I	Port detects adjacent interference of station.
49	S. METER	I	Signal meter input terminal.
50	$\overline{\text{DK}}$	I	DK signal input terminal.
51	$\overline{\text{RDS}}$	I	RDS signal input terminal.
52	CLOCK	O	Communication data sync signal output terminal.
53	PLL DATA OUT	O	Serial data output terminal.
54	$\overline{\text{LPE SW}}$	O	LPF time constant switching terminal to obtain fast response in AF search and FM seek operation.
55	$\overline{\text{IF MUTE}}$	O	Mute output terminal to prevent shock noises in AF search operation.
56	CE	O	Data communication control signal output terminal.
57	DYNAS	O	DYNAS mode selection control terminal.
58	LW	O	LW band selection terminal.
59	FM/$\overline{\text{AM}}$	O	FM/AM (MW/LW) bands selection terminal.
60	L/$\overline{\text{D}}$	O	SEEK sensitivity switch control output terminal.
61	MONO	O	Stereo/Mono switch control output terminal.
62	DTS CE	I	Terminal to make DTS in standby status.
63	SD	I	Station detector signal input terminal for FM/AM.
64	$\overline{\text{WR}}$	O	S•RAM $\overline{\text{WE}}$ control signal.

• 15590W53 : IC505

No.	Symbol	I/O	Terminal Description
1	RUN DET	I	Signal showing take-up reel is rotaing or not.
2	PACK DOWN SW	I	Switch to detect cassette holder is moved down completely. Pulled-up through 10k ~ 50k ohm resistor connected to BAT + 5V
3	PLAY SOL.	O	Attracts PLAY SOL and maintains HEAD BASE moved forward.
4	RF SOL.	O	Sets FF, REW, CUE, or REV mode by pulling RF SOL so that PINCH ROLLER is retracted from capastan shaft.
5	EJECT SOL.	O	Performs EJECT operation by pulling EJECT SOL to engage EJECT GEARS and to rotate motor in clockwise direction.
6	MOTOR CONT	O	Determines rotation direction of motor in GR mechanism.
7	RESET	I	System reset input terminal. Active low.
8	X2	–	Ceramic element connection terminal for system clock OSC. (4.19MHz)
9	X1	–	Ceramic element connection terminal for system clock OSC. (4.19MHz)
10	LEV	O	Signal to vary gain when judging blank space between programs in MS-IC because of different signal levels in PLAY and CUE & REV
11	CE DTS	O	Standby control terminal for DTS microcomputer.
12	0. MOTOR	O	Determines atart and stop of the motor in GR mechanism.
13	F/R	O	Determines running direction of tape depending upon rotation direction of motor. This signal is used to switch running direction and PRE AMP EQ circuit.
14	PACK IN	I	Switch to detect cassette is installed into cassette holder or not. Pulled-up through 10k ~ 50k ohm resistor connected to BAT + 5V
15	METAL	I	Metal/Normal tape detector Switch. Pull up at 5V
16	MS DET	I	MS detection signal developed by MS-IC.
17	KEY DATA	I	Key data sync signal input terminal from Display microcomputer.
18	DISP REQ	O	Indication data sync signal output terminal to Display microcomputer.
19	DISP CLK	O	Communication sync signal output terminal to Display microcomputer.
20	DISP DATA	O	Indication data signal output terminal to Display microcomputer.
21	CHGR DATA OUT	O	CD changer bus line data output terminal.
22	KEY REQ	I	Key data sync signal input terminal from Display microcomputer.
23	ENCODER A	I	Pulse input terminal from rotary encoder.
24	ENCODER B	I	Pulse input terminal from rotary encoder.
25	PUSH SW	I	Volume push SW detect terminal.
26	V_{SS}	–	GND potential terminal.
27	BATT	I	Battery power sensor terminal.
28	ACC	I	Ignition current detection terminal.
29	CHANGER IN	I	CD CHANGER bus line input terminal.
30	GND	I	GND short.
31	GND	–	GND short.
32	GND	–	GND short.
33	EXT AUDIO	I	SW detect terminal for the outside audio box use or not.
34	7618/7619	I	Initial setting switching terminal for 7618R and 7619R.
35	GND	O	No connection.
36	DTS MUTE	I	Audio mute signal input terminal from DTS microcomputer.
37	CE OUT	O	Standby control terminal for DTS microcomputer and Display microcomputer.
38	DTS STRT	I	Command sync signal input terminal from DTS microcomputer.
39	QRB ALARM	O	QRB alarm on, outputs to sound alarm after 2 sec of the ACC off.
40	TP ALARM	–	Develops alarm sound signal 25 sec after TP (SK) OFF in TP OFF alarm mode.

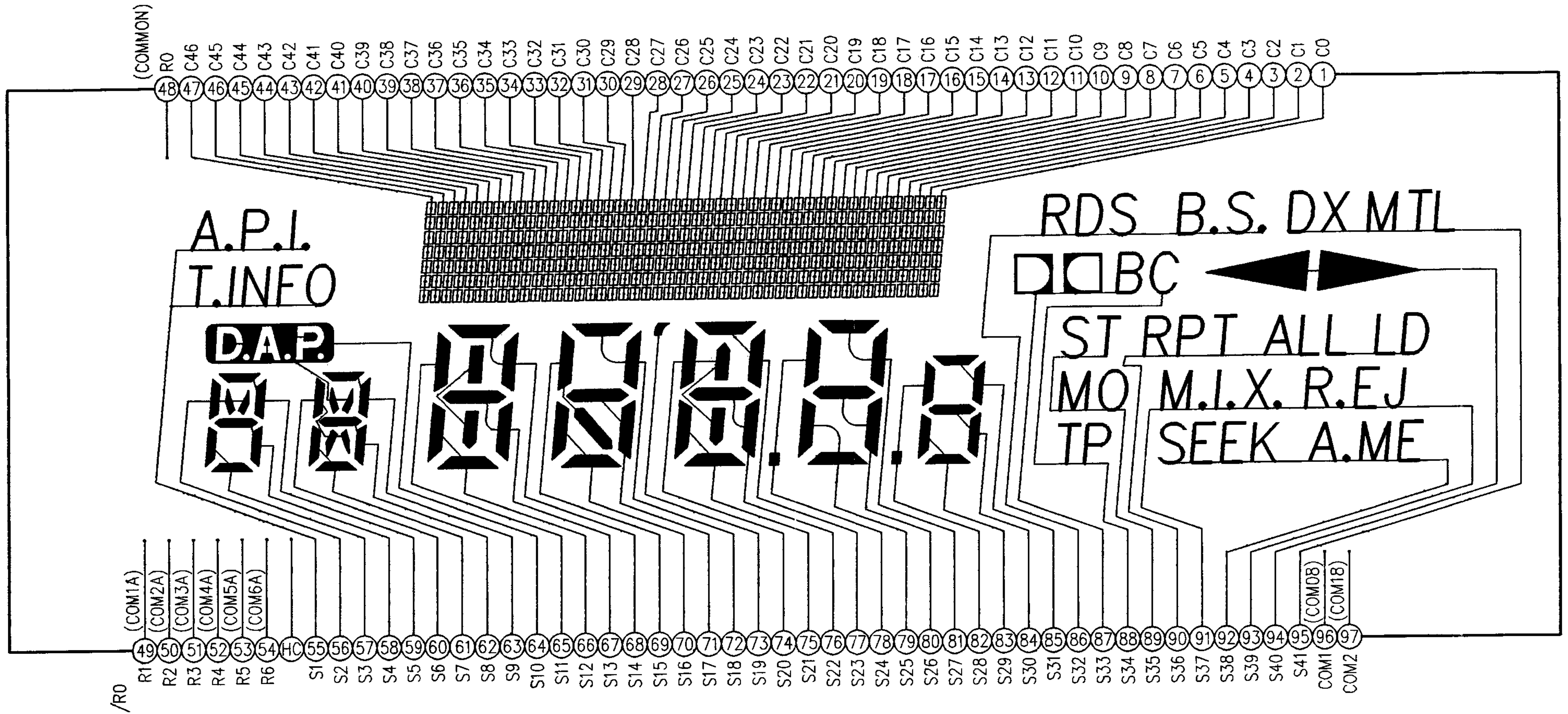
No.	Symbol	I/O	Terminal Description
41	DTS STS	I	Serial data signal input terminal from DTS microcomputer.
42	DTS CMD	O	Serial data signal input terminal for DTS microcomputer.
43	$\overline{\text{DTS SCK}}$	I	Input terminal for communication data sync signal sent from DTS microcomputer.
44	GND	I	GND short.
45	EV CE	O	CE output terminal to LC7537
46	EV DATA	O	Serial data output terminal to LC7537
47	EV CLK	O	Clock output terminal to LC7537
48	TP ALARM	–	Switches audio signal when TP OFF alarm signal outputs.
49	CHGR ON	O	Audio signal switching terminal.
50	TAPE/$\overline{\text{RADIO}}$	O	Audio signal switching terminal.
51	$\overline{\text{DOLBY B}}$	O	Dolby B mode Low output. Active Low.
52	$\overline{\text{DOLBY C}}$	O	Dolby C mode Low output. Active Low.
53	NC	–	GND short.
54	NC	–	GND short.
55	OUT INT	–	Terminal which makes the then unit to PAUSE mode in T INFO on and TP OFF ALARM.
56	OUT REMOTE	–	Terminal which informs that 7618R is in operation to the other unit.
57	V_{DD}	–	Connect to V_{DD}
58	V_{DD}	–	Positive power supply.
59	ORG/GRN	–	Two color switching control signal output terminal.
60	DTS STNBY	O	Standby pulse output terminal to DTS microcomputer.
61	POWER CONT	O	Develops "High" level at power ON.
62	$\overline{\text{MUTE}}$	O	Audio mute output terminal. Develops output When operation varies , in FF/REW mode , DTS MUTE enters.
63	IN PAUSE	I	Terminal which detects the then unit is in operation.
64	IN INT	I	Input terminal to set the unit to PAUSE mode during cellular operation.

Tuner Schematic Diagram

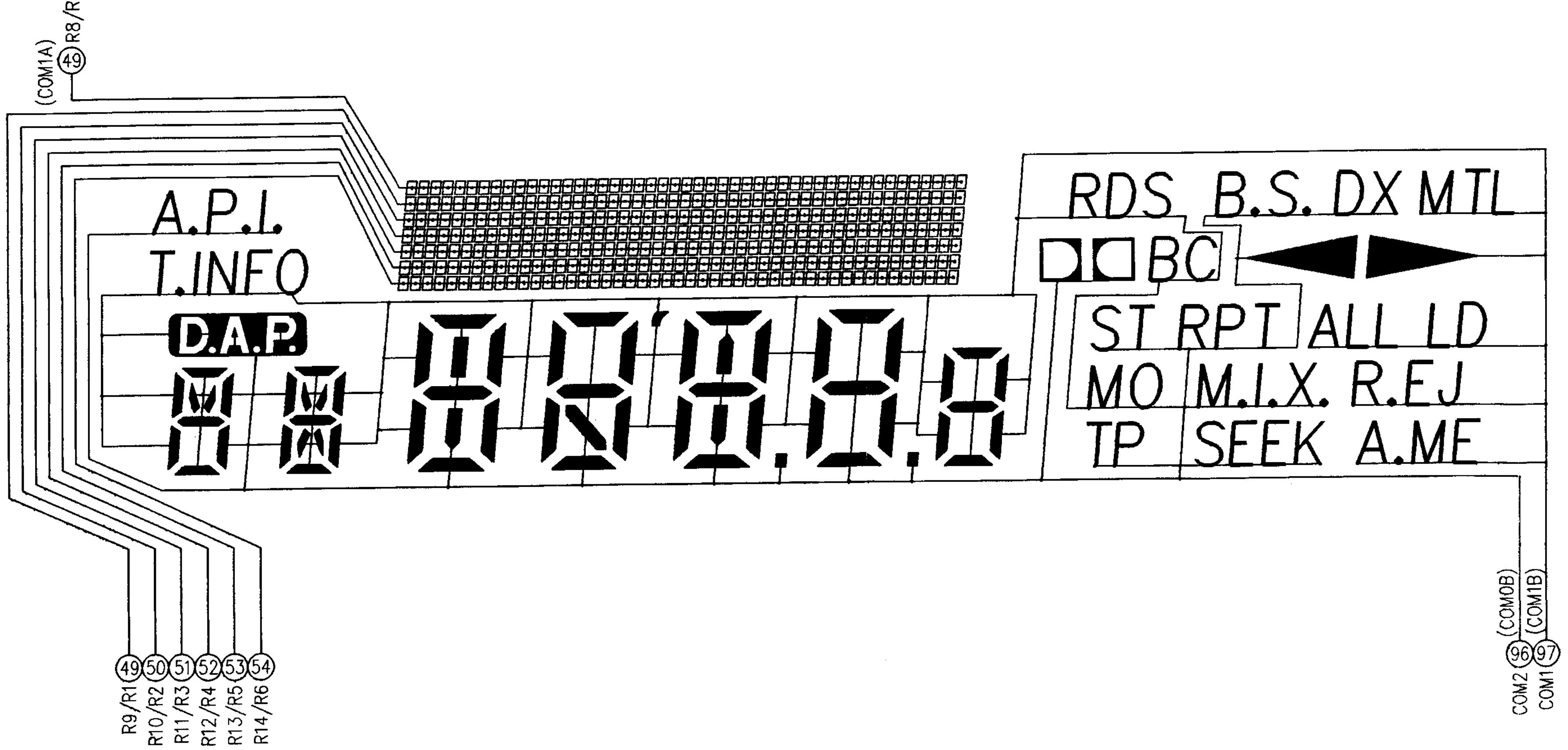

R2014 470
C2013 0.01
IC2001
C2007 39P
Q2001
R2008 100
C2011 5P
L2003
T2001
C2232 1000P
R2007 6.8K
VD2001
C2005 3P
L2001
VD2002
C2022 7P
R2018 33
L2002 2.2μH
R2006 68K
C2008 0.01
C2009 0.01
R2009 150
C2018 0.022
C2014 0.1/50
R2017 150
Q2203
C2006 2P
R2002 27K
C2004 33P
C2003 15P
R2016 56K
R2015 91K
C2010 0.01
R2010 10
TH2001 500
C2019 1P
R2004 10K
R2005 22K
R2011 47K
C2015 2.2/25
R2020 330
CF2001
R2001 270
R2003 47K
C2002 1000P
C2001 1000P
Q2002
CB2001
L/D 17
F-OUT/FM 16
VT 19
GND 18
D2001
R2012 22K
C2016 7P
R2021 330
R2201 10
L2202 15μH
L2201 4.7μH
L2004
CF2002
Q2003
C2231 18P
R2013 100
C2012 100P
VD2003
C2017 10P
R2019 330
ANT
GND/ANT
DSP2001
L2005 0.1μH
C2230 1000P
C2020 0.01
C2021 100/10
R2022 10
JK2001
7 GND
6 S-M/FM
1 AF-OUT/FM
CF2003
C2234 1000P
R2202 100K
C2104 100/10
C2103 0.022
C2105 10P
R2102 10K
C2101 1000P
C2102 100P
C2114 2.2/50
L2101 12μH
C2113 15P
3 IF-OUT/FM
8 Vcc/FM
4 0V(9PIN)
5 SD/FM
2 0V(13PIN)
10 F-OUT/AM
9 Vcc/AM
11 AF-OUT/AM
C2202 0.01
T2101
R2105 1.2K
R2106 22K
CB2003
R2206 100K
R2101 330
C2107 0.01
R2103 11K
C2106 0.01
C2108 0.01
VR2101 10K
C2109 0.22/50
C2110 0.1/50
C2111 0.47/50
R2104 8.2K
VR2102 10K
C2112 10/16
IC2101
C2203 0.047
R2203 22
C2206 0.047
R2212 10
C2215 0.047
C2207 33P
C2208 0.47/35
VD2201
R2207 47
R2225 470
R2208 47
CF2201
R2210 5.1K
C2211 0.047
R2211 3K
CF2202
C2214 0.047
R2215 2.2K
T2201
T2202
L2204 1mH
R2204 680
C2204 0.01
C2205 330P
L2205
C2209 0.022
C2210 10/16
C2212 47P
C2213 13P
X2201
IC2201
T2203
C2218 0.022
L2206 100μH
C2217 100P
C2219 0.022
C2220 47/16
C2221 0.022
C2222 2.2/50
D2202
C2224 0.01
R2223 22K
C2225 10/15
R2220 27K
C2228 0.01
C2227 100/10
C2229 2.2/50
L2203
C2216 68P
Q2202
Q2201
D2203
C2201 6800P
D2201
R2216 3.6K
12 S-M/AM
13 MUTE/FM
14 IF-OUT/AM
15 REQ/AM
CB2002

LCD Display

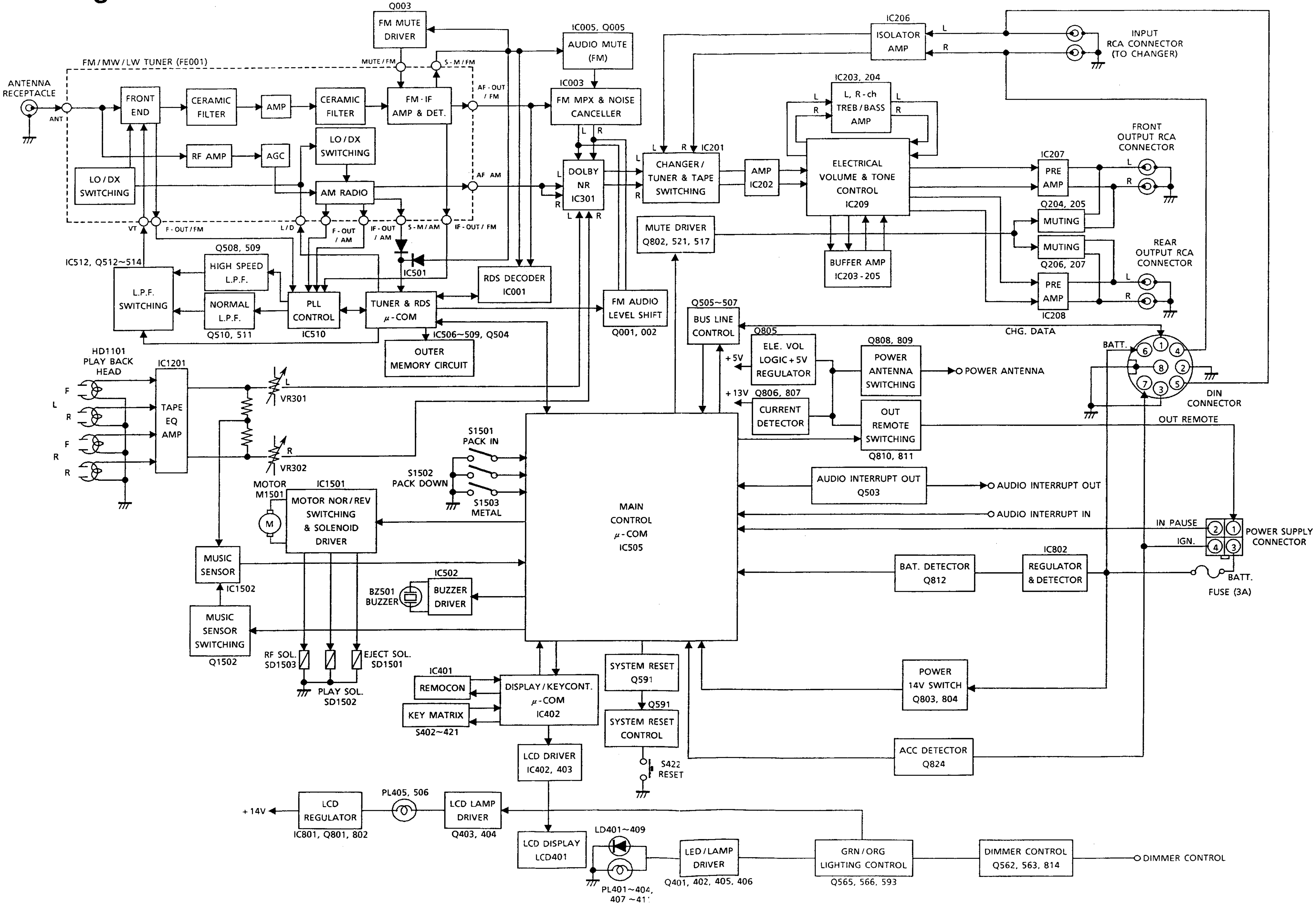
SEGMENT


(COMMON)
R0 ㊽
C46 ㊼
C45 ㊻
C44 ㊺
C43 ㊹
C42 ㊸
C41 ㊷
C40 ㊶
C39 ㊴
C38 ㊳
C37 ㊲
C36 ㊱
C35 ㉟
C34 ㉞
C33 ㉝
C32 ㉜
C31 ㉛
C30 ㉚
C29 ㉙
C28 ㉘
C27 ㉗
C26 ㉖
C25 ㉕
C24 ㉔
C23 ㉓
C22 ㉒
C21 ㉑
C20 ⑳
C19 ⑲
C18 ⑱
C17 ⑰
C16 ⑯
C15 ⑮
C14 ⑭
C13 ⑬
C12 ⑫
C11 ⑪
C10 ⑩
C9 ⑨
C8 ⑧
C7 ⑦
C6 ⑥
C5 ⑤
C4 ④
C3 ③
C2 ②
C1 ①
C0
A.P.I.
T.INFO
D.A.P.
RDS B.S. DX MTL
BC
ST RPT ALL LD
MO M.I.X. R.EJ
TP SEEK A.ME
(COM1A) ㊾ R1
(COM2A) ㊿ R2
(COM3A) (51) R3
(COM4A) (52) R4
(COM5A) (53) R5
(COM6A) (54) R6
HC
(55) S1
(56) S2
(57) S3
(58) S4
(59) S5
(60) S6
(61) S7
(62) S8
(63) S9
(64) S10
(65) S11
(66) S12
(67) S13
(68) S14
(69) S15
(70) S16
(71) S17
(72) S18
(73) S19
(74) S20
(75) S21
(76) S22
(77) S23
(78) S24
(79) S25
(80) S26
(81) S27
(82) S28
(83) S29
(84) S30
(85) S31
(86) S32
(87) S33
(88) S34
(89) S35
(90) S36
(91) S37
(92) S38
(93) S39
(94) S40
(95) S41
(COM0B) (96) COM1
(COM1B) (97) COM2

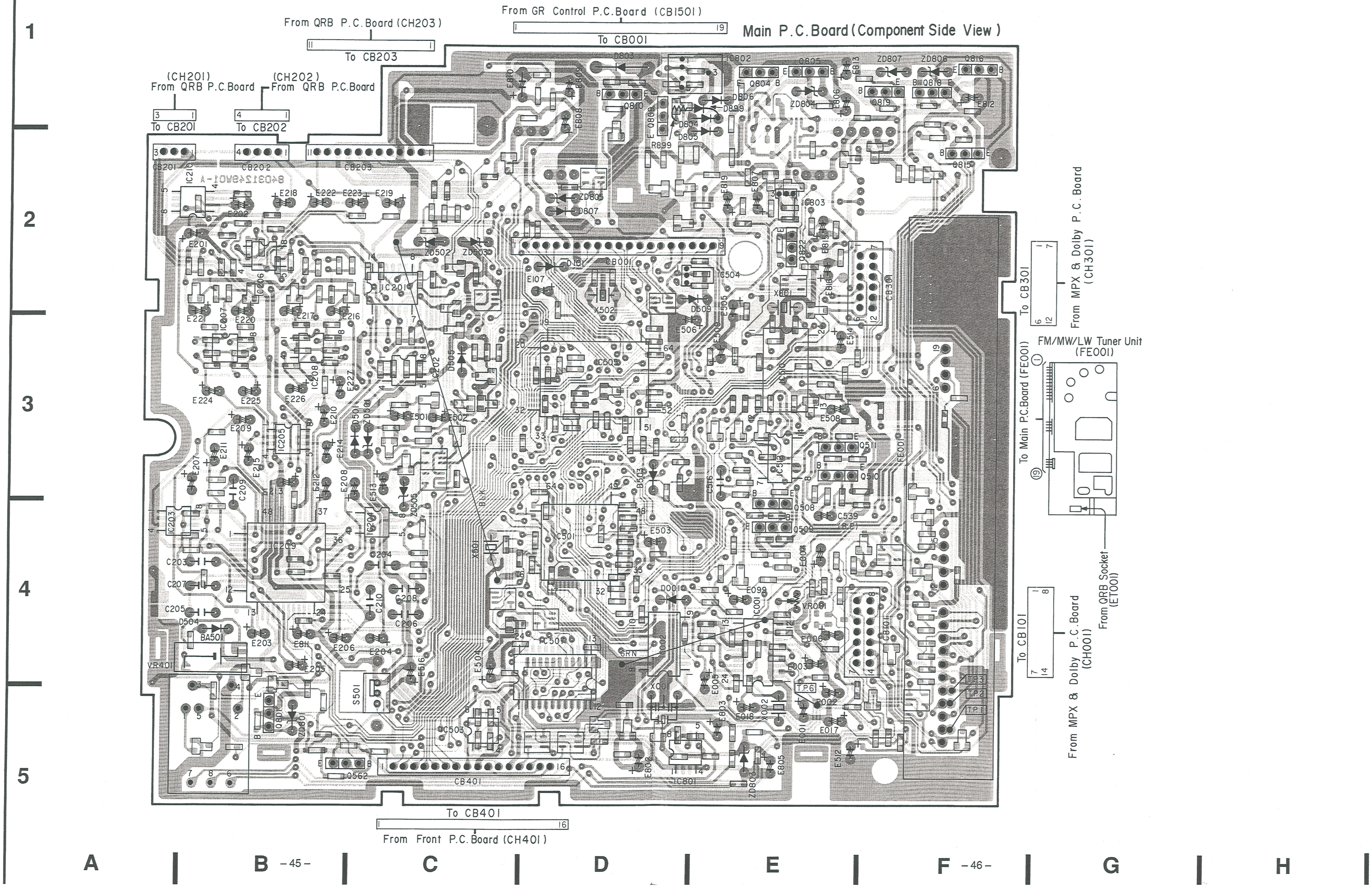
COMMON


(COM1A) ㊾ R8/R0
A.P.I.
T.INFO
D.A.P.
RDS B.S. DX MTL
BC
ST RPT ALL LD
MO M.I.X. R.EJ
TP SEEK A.ME
㊾ R9/R1
㊿ R10/R2
(51) R11/R3
(52) R12/R4
(53) R13/R5
(54) R14/R6
(COM0B) (96) COM2
(COM1B) (97) COM1

Block Diagram

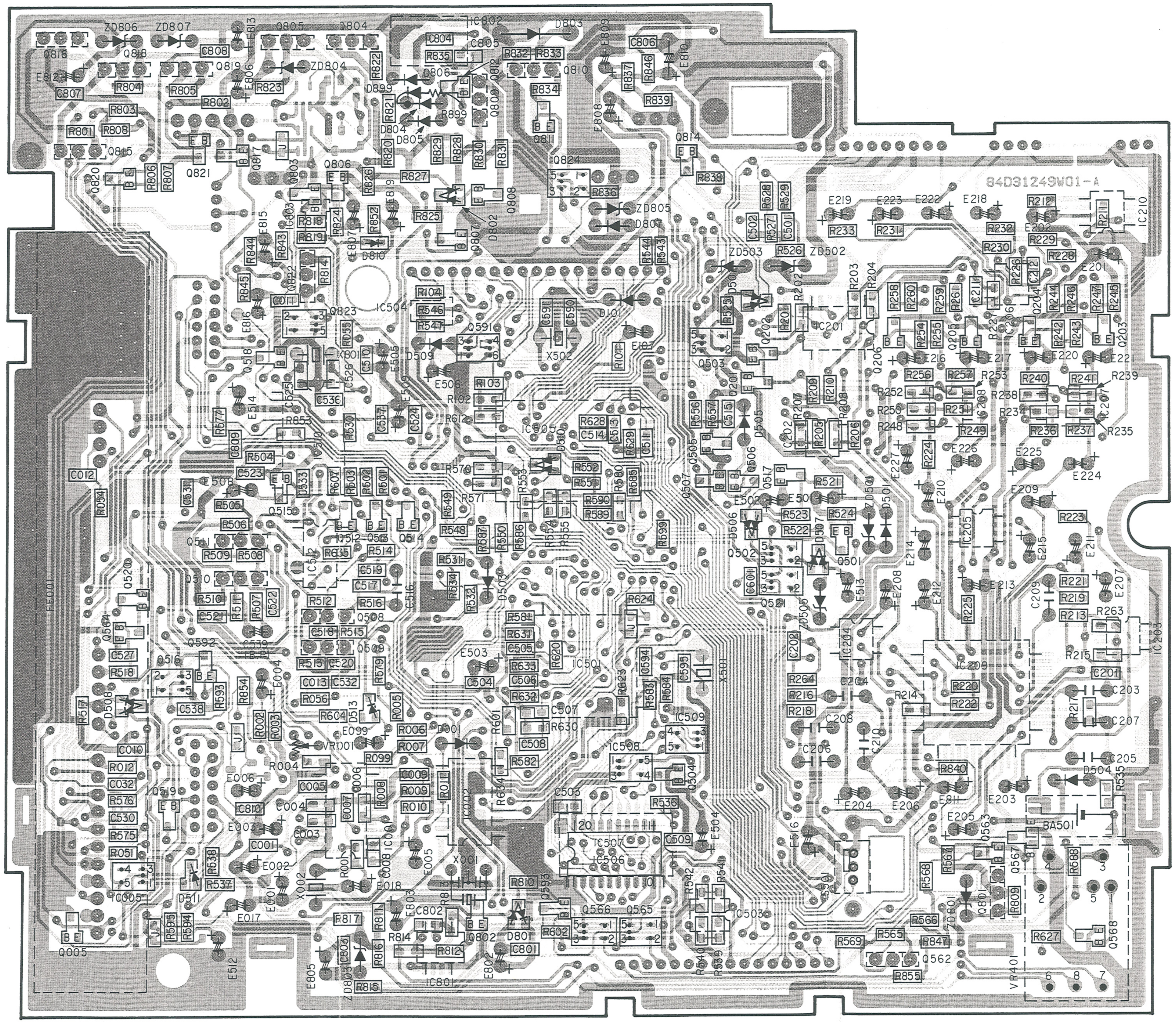

Q003
FM MUTE DRIVER
IC005, Q005
AUDIO MUTE (FM)
IC003
FM MPX & NOISE CANCELLER
FM/MW/LW TUNER (FE001)
MUTE/FM
S-M/FM
AF-OUT / FM
ANTENNA RECEPTACLE
ANT
FRONT END
CERAMIC FILTER
AMP
CERAMIC FILTER
FM·IF AMP & DET.
LO/DX SWITCHING
RF AMP
AGC
AM RADIO
AF AM
LO/DX SWITCHING
VT
F-OUT/FM
L/D
F-OUT / AM
IF-OUT / AM
S-M/AM
IF-OUT/ FM
IC501
IC512, Q512~514
L.P.F. SWITCHING
Q508, 509
HIGH SPEED L.P.F.
NORMAL L.P.F.
Q510, 511
PLL CONTROL
IC510
TUNER & RDS μ-COM
RDS DECODER IC001
IC506~509, Q504
OUTER MEMORY CIRCUIT
FM AUDIO LEVEL SHIFT
Q001, 002
DOLBY NR IC301
L
R
CHANGER/ TUNER & TAPE SWITCHING
IC201
AMP IC202
IC206
ISOLATOR AMP
INPUT RCA CONNECTOR (TO CHANGER)
IC203, 204
L, R-ch TREB/BASS AMP
ELECTRICAL VOLUME & TONE CONTROL IC209
BUFFER AMP IC203-205
MUTE DRIVER Q802, 521, 517
IC207
PRE AMP
Q204, 205
MUTING
MUTING
Q206, 207
PRE AMP
IC208
FRONT OUTPUT RCA CONNECTOR
REAR OUTPUT RCA CONNECTOR
CHG. DATA
BATT.
DIN CONNECTOR
OUT REMOTE
HD1101 PLAY BACK HEAD
F
R
IC1201
TAPE EQ AMP
VR301
VR302
Q505~507
BUS LINE CONTROL
Q805
ELE. VOL LOGIC+5V REGULATOR
+5V
+13V
Q806, 807
CURRENT DETECTOR
Q808, 809
POWER ANTENNA SWITCHING
POWER ANTENNA
OUT REMOTE SWITCHING
Q810, 811
S1501 PACK IN
S1502 PACK DOWN
S1503 METAL
MOTOR M1501
M
IC1501
MOTOR NOR/REV SWITCHING & SOLENOID DRIVER
MAIN CONTROL μ-COM IC505
AUDIO INTERRUPT OUT Q503
AUDIO INTERRUPT OUT
AUDIO INTERRUPT IN
IN PAUSE
IGN.
POWER SUPPLY CONNECTOR
MUSIC SENSOR
IC1502
MUSIC SENSOR SWITCHING
Q1502
BZ501 BUZZER
IC502
BUZZER DRIVER
BAT. DETECTOR Q812
IC802
REGULATOR & DETECTOR
BATT.
FUSE (3A)
RF SOL. SD1503
EJECT SOL. SD1501
PLAY SOL. SD1502
IC401
REMOCON
KEY MATRIX
S402~421
DISPLAY/KEYCONT. μ-COM IC402
SYSTEM RESET Q591
Q591
SYSTEM RESET CONTROL
S422 RESET
POWER 14V SWITCH Q803, 804
ACC DETECTOR Q824
LCD DRIVER IC402, 403
+14V
LCD REGULATOR
IC801, Q801, 802
PL405, 506
LCD LAMP DRIVER
Q403, 404
LCD DISPLAY LCD401
LD401~409
PL401~404, 407~41
LED/LAMP DRIVER
Q401, 402, 405, 406
GRN/ORG LIGHTING CONTROL
Q565, 566, 593
DIMMER CONTROL Q562, 563, 814
DIMMER CONTROL

Parts Layout on P.C. Boards and Wiring Diagram (1/2)


Main P.C. Board (Component Side View)
From GR Control P.C. Board (CB1501)
To CB001
From QRB P.C. Board (CH203)
To CB203
(CH201) From QRB P.C. Board
To CB201
(CH202) From QRB P.C. Board
To CB202
CB201
CB202
CB203
CB001
CB301
To CB301
From MPX & Dolby P.C. Board (CH301)
FM/MW/LW Tuner Unit (FE001)
To Main P.C. Board (FE001)
From QRB Socket (ET001)
To CB101
From MPX & Dolby P.C. Board (CH001)
CB401
To CB401
From Front P.C. Board (CH401)
IC201
IC203
IC205
IC207
IC208
IC209
IC501
IC503
IC504
IC505
IC510
IC801
IC803
IC001
IC002
X501
X502
X801
X001
X002
S501
VR401
VR001
BA501
BLK
GRN
T.P.1
T.P.2
T.P.3
T.P.6
1
2
3
4
5
A
B
C
D
E
F
G
H

Orange Color Pattern : Component Side Pattern
Blue Color Pattern : Foil Side Pattern

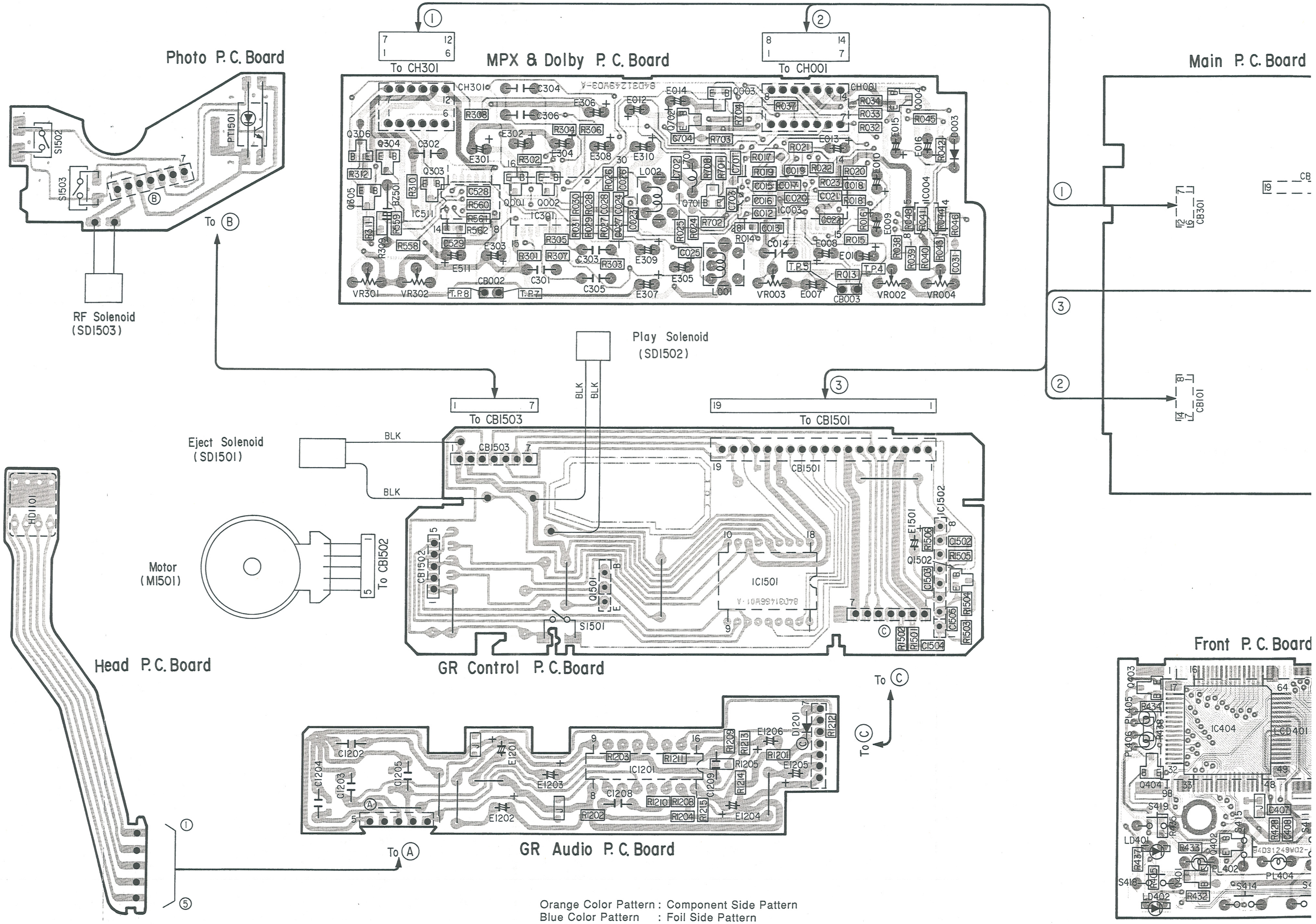
Main P.C. Board (Foil Side View)


84D31243W01-A

| H | I | J | K | L | M |

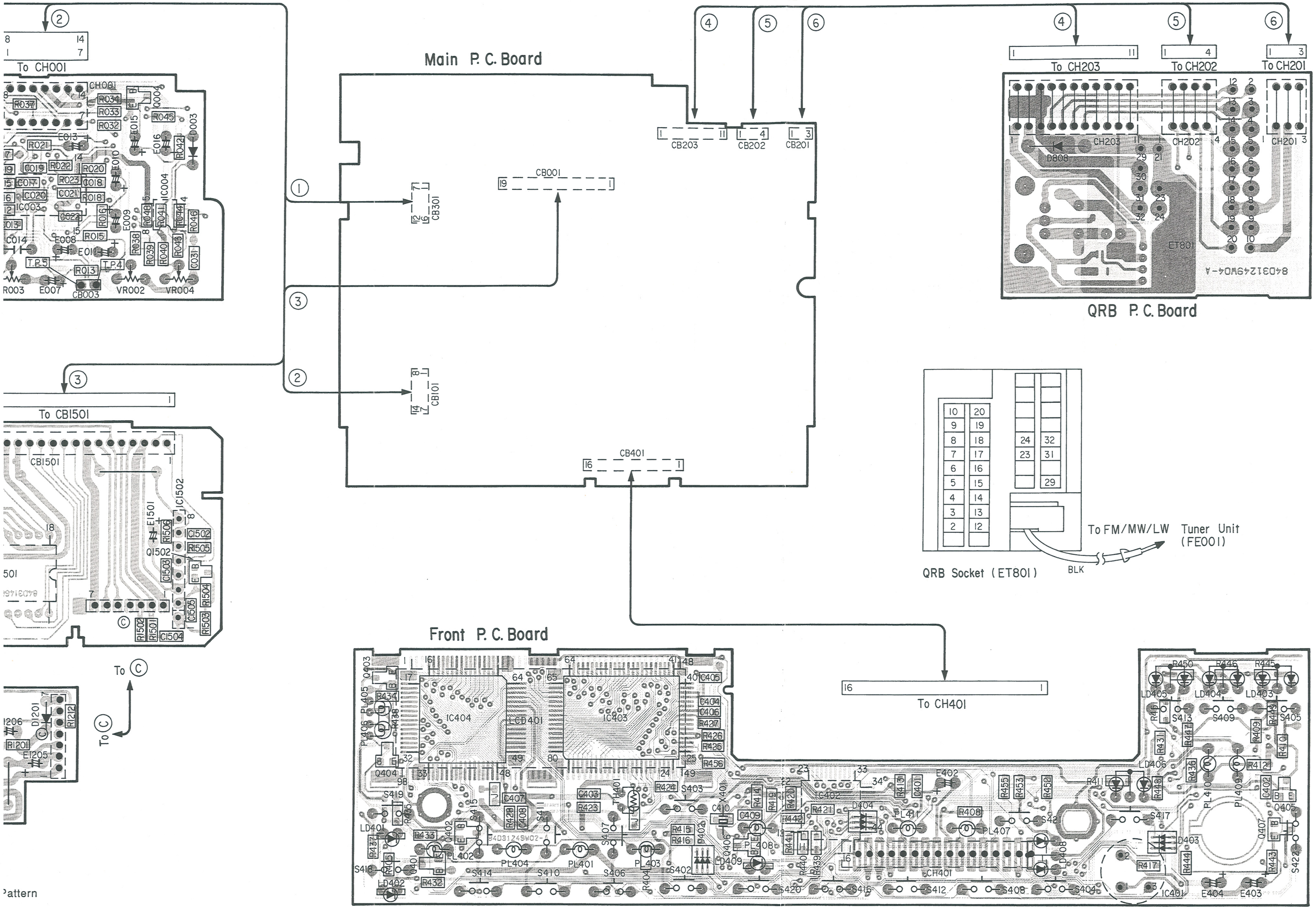
Parts Layout on P.C. Boards and Wiring Diagram (2/2)

All P.C. Boards viewed from soldered side.


1
2
3
4
5
Photo P.C. Board
MPX & Dolby P.C. Board
Main P.C. Board
To CH301
To CH001
RF Solenoid
(SD1503)
Play Solenoid
(SD1502)
Eject Solenoid
(SD1501)
To CB1503
To CB1501
To CB1502
Motor
(M1501)
BLK
Head P.C. Board
GR Control P.C. Board
GR Audio P.C. Board
Front P.C. Board
To Ⓐ
To Ⓑ
To Ⓒ
CB301
CB101
IC1501
IC1201
IC404
IC301
IC511
IC003
S1501
S1502
S1503
VR301
VR302
VR003
VR002
VR004
A
B
C
D
E
F
G
H

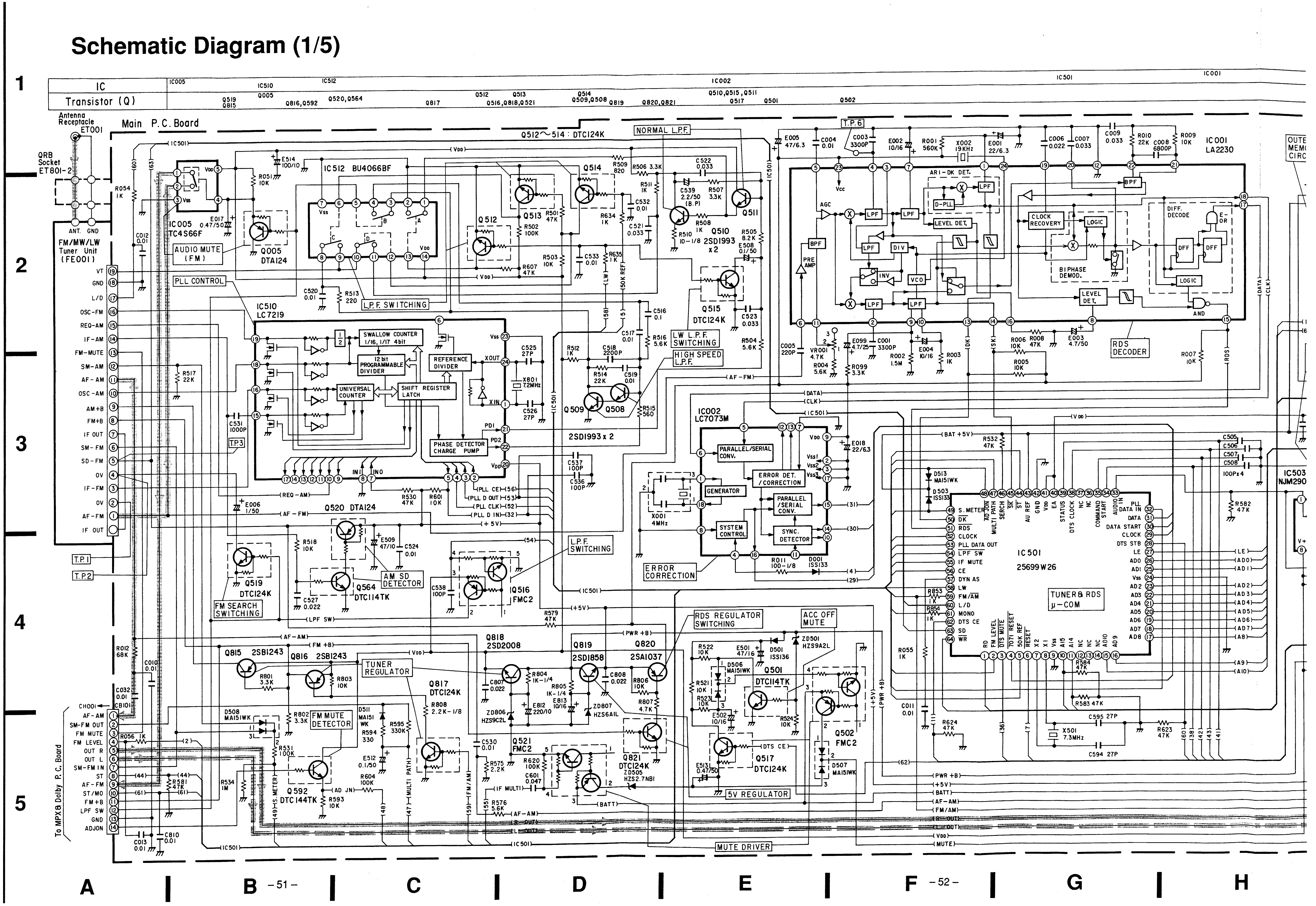
Orange Color Pattern : Component Side Pattern
Blue Color Pattern : Foil Side Pattern

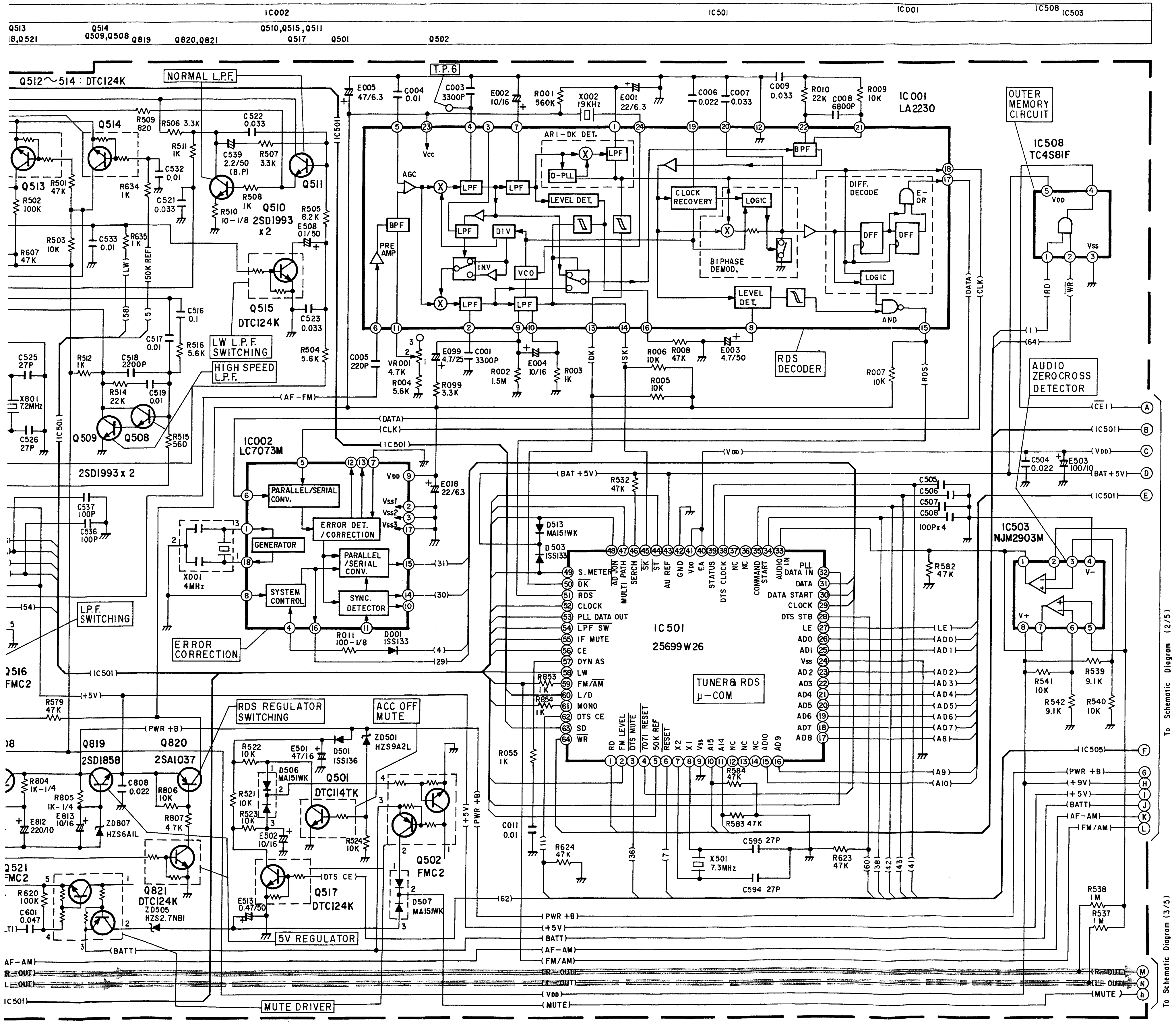
wed from soldered side.


Main P. C. Board
CB203
CB202
CB201
CB001
CB301
CB101
CB401
QRB P. C. Board
To CH203
To CH202
To CH201
CH203
CH202
CH201
ET801
84D3124904-A
QRB Socket (ET801)
To FM/MW/LW Tuner Unit (FE001)
BLK
To CH001
CH001
To CB1501
CB1501
IC1502
Q1502
E1501
To Ⓒ
Front P. C. Board
IC404
IC403
LCD401
To CH401
CH401
IC401
IC402
84D3124902
Pattern

F
G
H
I
J
K
L
M

Schematic Diagram (1/5)


IC
Transistor (Q)
IC005
IC510
IC512
IC002
IC501
IC001
Main P.C. Board
Antenna Receptacle ET001
QRB Socket ET801-2
FM/MW/LW Tuner Unit (FE001)
IC005 TC4S66F
AUDIO MUTE (FM)
Q005 DTA124
IC512 BU4066BF
L.P.F. SWITCHING
Q512~514 : DTC124K
NORMAL L.P.F.
Q510 2SD1993 x2
Q511
Q515 DTC124K
LW L.P.F. SWITCHING
HIGH SPEED L.P.F.
PLL CONTROL
IC510 LC7219
SWALLOW COUNTER 1/16, 1/17 4bit
12 bit PROGRAMMABLE DIVIDER
REFERENCE DIVIDER
UNIVERSAL COUNTER
SHIFT REGISTER LATCH
PHASE DETECTOR CHARGE PUMP
X801 7.2MHz
Q509 Q508 2SD1993 x 2
IC001 LA2230
RDS DECODER
IC002 LC7073M
PARALLEL/SERIAL CONV.
ERROR DET. /CORRECTION
GENERATOR
SYSTEM CONTROL
SYNC. DETECTOR
ERROR CORRECTION
X001 4MHz
IC501 25699W26
TUNER & RDS μ-COM
X501 7.3MHz
Q520 DTA124
Q519 DTC124K
FM SEARCH SWITCHING
Q564 DTC114TK
AM SD DETECTOR
IQ516 FMC2
Q815 2SB1243
Q816 2SB1243
TUNER REGULATOR
Q817 DTC124K
Q818 2SD2008
Q819 2SD1858
Q820 2SA1037
Q821 DTC124K
Q521 FMC2
FM MUTE DETECTOR
Q592 DTC144TK
RDS REGULATOR SWITCHING
ACC OFF MUTE
Q501 DTC114TK
Q517 DTC124K
Q502 FMC2
5V REGULATOR
MUTE DRIVER
To MPX & Dolby P.C. Board
IC503 NJM290
1
2
3
4
5
A
B
C
D
E
F
G
H


IC002
IC501
IC001
IC508 IC503
Q513 Q514 Q510,Q515,Q511
Q509,Q508 Q819 Q820,Q821 Q517 Q501 Q502
Q512〜514 : DTC124K
NORMAL L.P.F.
T.P.6
IC001 LA2230
OUTER MEMORY CIRCUIT
IC508 TC4S81F
ARI-DK DET.
AGC
PRE AMP
BPF
LPF
LEVEL DET.
D-PLL
DIV
INV
VCO
CLOCK RECOVERY
LOGIC
BIPHASE DEMOD.
DIFF. DECODE
DFF
AND
RDS DECODER
AUDIO ZEROCROSS DETECTOR
Q510 2SD1993 x2
Q511
Q515 DTC124K
LW L.P.F. SWITCHING
HIGH SPEED L.P.F.
Q509 Q508 2SD1993 x 2
X801 7.2MHz
IC002 LC7073M
PARALLEL/SERIAL CONV.
ERROR DET. /CORRECTION
GENERATOR
PARALLEL /SERIAL CONV.
SYSTEM CONTROL
SYNC. DETECTOR
X001 4MHz
L.P.F. SWITCHING
ERROR CORRECTION
IC501 25699W26
TUNER& RDS μ-COM
IC503 NJM2903M
Q516 FMC2
Q819 2SD1858
Q820 2SA1037
RDS REGULATOR SWITCHING
ACC OFF MUTE
Q501 DTC114TK
Q502 FMC2
Q821 DTC124K
Q517 DTC124K
Q521 FMC2
5V REGULATOR
MUTE DRIVER
X501 7.3MHz
To Schematic Diagram (2/5)
To Schematic Diagram (3/5)

IC001

1	1.5 V	13	4.9V/0.7V	DK OFF/ON
2	1.4 V	14	4.9V/0.7V	SK OFF/ON
3	0.6 V	15	4.9V/0.7V	RDB OFF/ON
4	1.4 V	16	0 V	
5	2.3 V	17	PS	
6	2.4 V	18	2.4 V	
7	2.7 V	19	PS	
8	0.1 V	20	1.1 V	
9	1.4 V	21	2.1 V	
10	0 V	22	2.1 V	
11	0.7 V	23	4.9 V	
12	0 V	24	3.9 V	

IC002

1	PS
2	0 V
3	0 V
4	4.8 V
5	PS
6	PS
7	0 V
8	0 V
9	4.9 V
10	0 V
11	0 V
12	0 V
13	0 V
14	4.9 V
15	4.9 V
16	4.9 V
17	0 V
18	PS

IC501

1	PS		33	PS	
2	0 V		34	PS	
3	4.8 V		35	PS	
4	4.8 V		36	0.3 V	
5	0 V		37	PS	
6	4.8 V	RESET	38	PS	
7	PS		39	PS	
8	PS		40	4.8 V	
9	0 V		41	4.8 V	
10	PS		42	0 V	
11	PS		43	4.9 V	
12	PS		44	0.6 V	ST
13	PS		45	0.7 V	SK
14	PS		46	4.9 V	
15	PS		47	5.2 V	
16	PS		48	5.1 V	
17	PS		49	4.6 V	
18	PS		50	4.9 V	DK
19	PS		51	0.7 V	RDS
20	PS		52	PS	
21	PS		53	PS	
22	PS		54	4.8V/PS	OFF/AM SEARCH
23	PS		55	4.8V/PS	OFF/AM SEARCH
24	0 V		56	PS	
25	PS		57	PS	
26	PS		58	4.8 V	LW
27	0 V		59	4.8V/0V	FM/AM
28	0V/PS		60	0 V	L/D
29	PS		61	4.8 V	MONO
30	PS		62	PS	
31	PS		63	PS	
32	PS		64	PS	

IC005

1	2.5 V	
2	2.5 V	
3	0 V	
4	9V/PS	OFF/ON
5	9V	

IC503

1	4.9 V
2	4.3 V
3	4.7 V
4	0 V
5	4.3 V
6	4.2 V
7	4.9 V
8	9V

IC510

1	PS		13	0 V
2	PS		14	0 V
3	PS		15	0 V
4	PS		16	0 V
5	PS		17	0 V
6	0 V		18	2.4 V
7	4.9 V		19	2.4 V
8	0 V		20	5 V
9	0 V		21	1.2 V
10	0V/4.9V	OFF/AM SEEK	22	1.1 V
11	0 V		23	0 V
12	0 V		24	PS

IC508

1	PS
2	PS
3	0 V
4	PS
5	4.9 V

IC512

1	0.2 V		8	0.7 V	
2	0 V		9	3.3 V	
3	0.7 V		10	3.3 V	
4	0.7 V		11	3.2 V	
5	9.1V/0.7V	OFF/FM SEEK	12	8V/0V	OFF/API ON
6	0V/9V	OFF/AM ON	13	9V/0V	OFF/LW
7	0 V		14		

	E	C	B	MODE			C	B	MODE
Q005	8.9 V	0 V	8.9 V		Q519	0 V	0 V	8.9 V	
Q501	5 V	0 V	0 V		Q520	4.9 V	4.8V/0V	4.9 V	FM/AM
Q508	0.7 V	0.7V/PS	1.2V/PS	OFF/LW	Q564	0 V	4.9 V	4.8V/0V	FM/AM
Q509	0 V	0.7V/PS	0.7 V	OFF/LW	Q592	0 V	9 V	PS	
Q510	0 V	3.2V/1.9V	0.6 V	OFF/LW	Q815	9 V	0.5 V	9 V	
Q511	0.6 V	8.9 V	1.2V/1.1V	OFF/LW	Q816	9 V	9 V	8.4 V	
Q512	0 V	8.9V/0V	0V/4.5V	OFF/LW	Q817	0 V	8.9 V	0 V	
Q513	0 V	0V/8.8V	3V/0V	OFF/API	Q818	8.9 V	13.4 V	9.5 V	
Q514	0 V	8V/0V	0V/4.6V	OFF/API	Q819	4.9 V	13.4 V	5.5 V	
Q515	0 V	0 V	4.5 V		Q820	4.9 V	4.8V/0V	4.2V/4.9V	FM/AM
Q517	0 V	0 V	4.8 V		Q821	0 V	0V/4.9V	8.9V/0.6V	FM/AM

	1	2	3	4	5	MODE
Q502	13.5V/0V	0V/13.5V	13.4 V	0V/6.2V	0 V	MUTE OFF/ON
Q516	8.9 V	0 V	0 V	4.8 V	8.9 V	
Q521	13.5 V	0 V	13.5 V	0 V	0 V	

〔Measuring Conditions〕

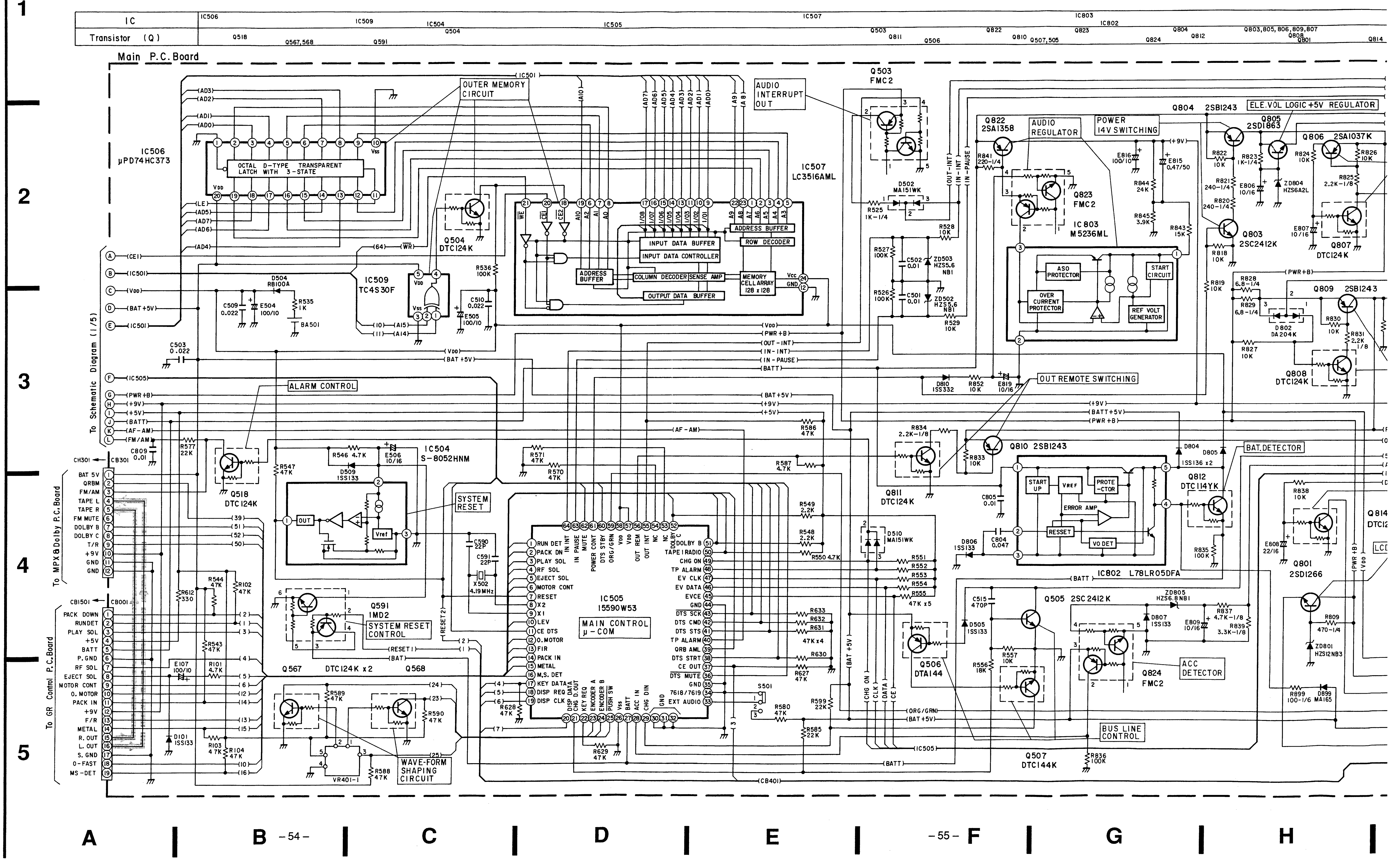
. Power Supply Voltage : DC14.4V
· Measuring Meter : Digital Voltmeter
· Measuring Point Reference : Between GND
· Measuring Conditions : TAPE : No Bias Tape
FM : 98.1MHz (No Signal Input)
MW : 999KHz (No Signal Input)
LW : 216KHz (No Signal Input)

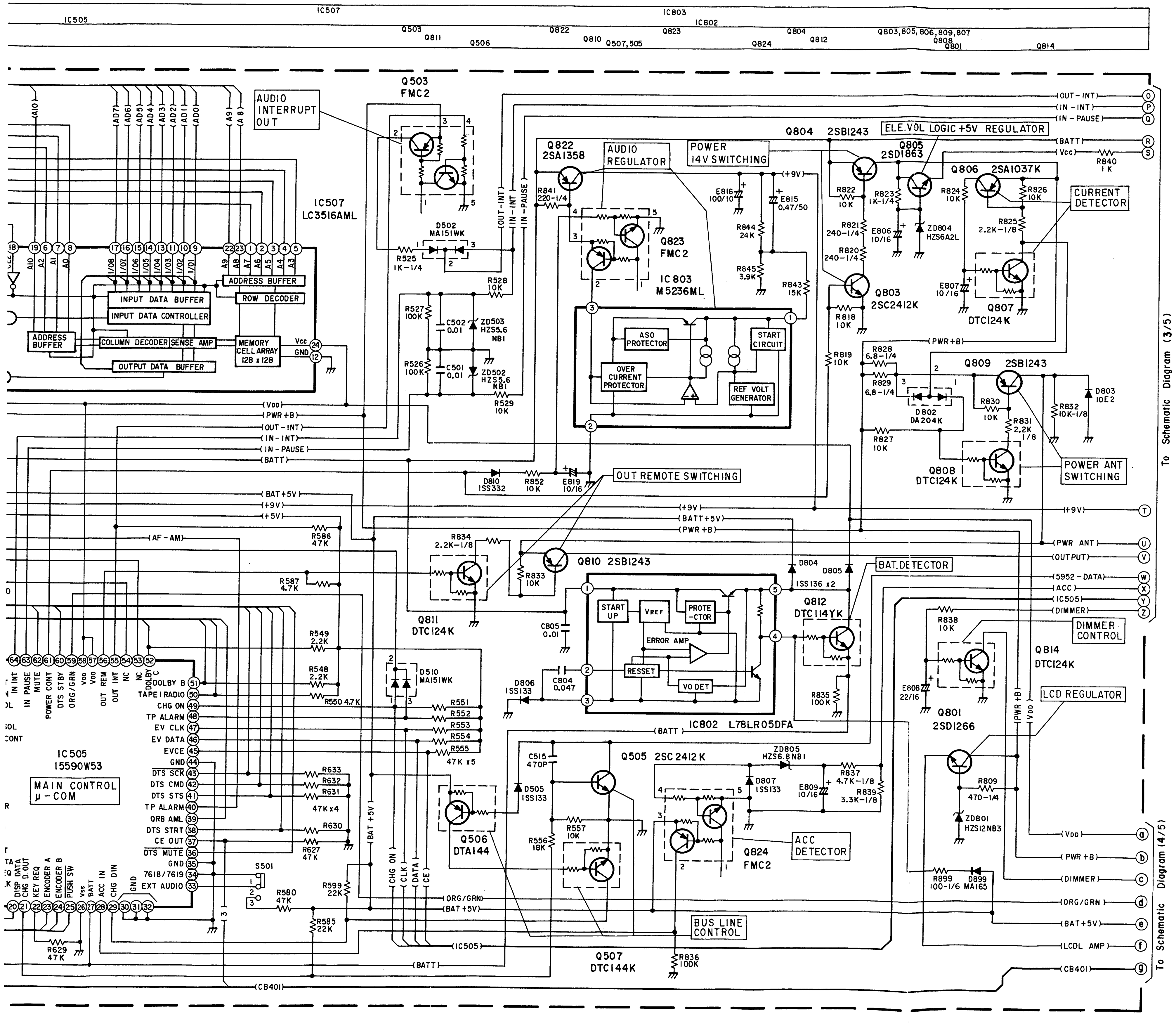
NOTES:

1. All resistance values are in ohms. K = 1,000
2. All capacitance values are in microfarads. $P = \frac{1}{1,000,000}$

D | E | F -52- | G | H | I | J -53- | K |

Schematic Diagram (2/5)


1
2
3
4
5
A
B
C
D
E
F
G
H
IC
Transistor (Q)
IC506
IC509
IC504
IC505
IC507
IC803
IC802
Q518
Q567,568
Q591
Q504
Q503
Q811
Q506
Q822
Q810
Q507,505
Q823
Q824
Q804
Q812
Q803,805,806,809,807
Q808
Q801
Q814
Main P.C. Board
IC506
μPD74HC373
OCTAL D-TYPE TRANSPARENT LATCH WITH 3-STATE
OUTER MEMORY CIRCUIT
IC507
LC3516AML
INPUT DATA BUFFER
INPUT DATA CONTROLLER
ADDRESS BUFFER
ROW DECODER
COLUMN DECODER
SENSE AMP
MEMORY CELL ARRAY 128 x 128
OUTPUT DATA BUFFER
AUDIO INTERRUPT OUT
Q503
FMC2
Q504
DTC124K
IC509
TC4S30F
D504
RB100A
BA501
ALARM CONTROL
Q518
DTC124K
IC504
S-8052HNM
SYSTEM RESET
Q591
IMD2
SYSTEM RESET CONTROL
Q567
DTC124K x2
Q568
WAVE-FORM SHAPING CIRCUIT
VR401-1
X502
4.19MHz
IC505
15590W53
MAIN CONTROL μ-COM
S501
Q822
2SA1358
AUDIO REGULATOR
POWER 14V SWITCHING
Q823
FMC2
IC803
M5236ML
ASO PROTECTOR
START CIRCUIT
OVER CURRENT PROTECTOR
REF VOLT GENERATOR
OUT REMOTE SWITCHING
Q804 2SB1243
Q805 2SD1863
ELE.VOL LOGIC +5V REGULATOR
Q806 2SA1037K
Q803 2SC2412K
Q807 DTC124K
Q809 2SB1243
DA204K
Q808 DTC124K
Q810 2SB1243
Q811 DTC124K
BAT.DETECTOR
Q812 DTC114YK
IC802 L78LR05DFA
START UP
Vref
PROTECTOR
ERROR AMP
RESSET
VO DET
D510 MA151WK
Q505 2SC2412K
Q506 DTA144
Q824 FMC2
ACC DETECTOR
Q507 DTC144K
BUS LINE CONTROL
Q801 2SD1266
To Schematic Diagram (1/5)
To MPX & Dolby P.C. Board
To GR Control P.C. Board
CH301
CB301
CB1501
CB001
BAT 5V
QRBM
FM/AM
TAPE L
TAPE R
FM MUTE
DOLBY B
DOLBY C
T/R
+9V
GND
PACK DOWN
RUNDET
PLAY SOL
+5V
BATT
P.GND
RF SOL
EJECT SOL
MOTOR CONT
O.MOTOR
PACK IN
F/R
METAL
R.OUT
L.OUT
S.GND
O-FAST
MS-DET
RUN DET
PACK DN
PLAY SOL
RF SOL
EJECT SOL
MOTOR CONT
RESET
X2
X1
LEV
CE DTS
O.MOTOR
FIR
PACK IN
METAL
M.S. DET
KEY DATA
DISP REQ
DISP CLK
DOLBY B
TAPE1RADIO
CHG ON
TP ALARM
EV CLK
EV DATA
EVCE
GND
DTS SCK
DTS CMD
DTS STS
TP ALARM
QRB AML
DTS STRT
CE OUT
DTS MUTE
GND
7618/7619
EXT AUDIO


IC505
IC507
IC803
IC802
Q503
Q811
Q506
Q822
Q810
Q507,505
Q823
Q824
Q804
Q812
Q803,805,806,809,807
Q808
Q801
Q814
AUDIO INTERRUPT OUT
Q503 FMC2
IC507 LC3516AML
ADDRESS BUFFER
ROW DECODER
INPUT DATA BUFFER
INPUT DATA CONTROLLER
COLUMN DECODER
SENSE AMP
MEMORY CELL ARRAY 128 x 128
OUTPUT DATA BUFFER
Q822 2SA1358
AUDIO REGULATOR
POWER 14V SWITCHING
Q823 FMC2
IC803 M5236ML
ASO PROTECTOR
START CIRCUIT
OVER CURRENT PROTECTOR
REF VOLT GENERATOR
Q804 2SB1243
ELE.VOL LOGIC +5V REGULATOR
Q805 2SD1863
Q806 2SA1037K
CURRENT DETECTOR
Q803 2SC2412K
Q807 DTC124K
Q809 2SB1243
D802 DA204K
Q808 DTC124K
POWER ANT SWITCHING
OUT REMOTE SWITCHING
Q810 2SB1243
Q811 DTC124K
BAT.DETECTOR
Q812 DTC114YK
IC802 L78LR05DFA
START UP
VREF
PROTE-CTOR
ERROR AMP
RESSET
VO DET
DIMMER CONTROL
Q814 DTC124K
LCD REGULATOR
Q801 2SD1266
Q505 2SC2412K
Q506 DTA144
Q824 FMC2
ACC DETECTOR
BUS LINE CONTROL
Q507 DTC144K
IC505 15590W53
MAIN CONTROL μ-COM
S501
(OUT-INT) Ⓞ
(IN-INT) Ⓟ
(IN-PAUSE) Ⓠ
(BATT) Ⓡ
(Vcc) Ⓢ
(+9V) Ⓣ
(PWR ANT) Ⓤ
(OUT PUT) Ⓥ
(5952-DATA) Ⓦ
(ACC) Ⓧ
(IC505) Ⓨ
(DIMMER) Ⓩ
(VDD) ⓐ
(PWR+B) ⓑ
(DIMMER) ⓒ
(ORG/GRN) ⓓ
(BAT+5V) ⓔ
(LCDL AMP) ⓕ
(CB401) ⓖ
To Schematic Diagram (3/5)
To Schematic Diagram (4/5)

IC505

1	0.2V/PS	OFF/PLAY	17	PS		33	0V/4.9V	OFF/ON	49	0 V	
2	0V/4.9V	PACON(PPCK-IN)	18	PS		34	0 V		50	4.2V/0V	T/R
3	0V/4.8V	OFF/PLAY	19	PS		35	0 V		51	4.6V/0V	OFF/DOL·B
4	0V/4.8V	FF·REW OFF/ON	20	PS		36	4.8V/0V	OFF/ON	52	4.6V/0V	OFF/DOL·C
5	0V/4.8V	EJECT OFF/ON	21	PS		37	4.8 V		53	0 V	
6	0V/4.8V	REW/FF	22	0 V		38	PS		54	0 V	
7	4.8 V	RESET	23	4.9V/PS	OFF/CW	39	0V/PS	OFF/ALM	55	0V/1.9V	OFF/ON
8	PS		24	4.9V/PS	OFF/CCW	40	0V/PS	OFF/ALM	56	4,2 V	
9	PS		25	4.9V/0V	OFF/MODE	41	PS		57	4.8 V	
10	0V/4.8V	FF·REW OFF/ON	26	0 V		42	PS		58	4.8 V	
11	4.8 V		27	4.8 V		43	PS		59	0V/4.8V	G/A
12	4.8 V		28	4.9 V		44	0 V		60	0V/PS	
13	0V/4.8V	R/F	29	PS		45	PS		61	4.8 V	
14	4.9 V	RACK·IN	30	0 V		46	PS		62	0 V	
15	4.9 V	METAL	31	0 V		47	PS		63	0V/5.2V	OFF/IN·PAUSE
16	PS		32	0 V		48	2.8 V		64	0V/5.2V	OFF/IN·INT

IC504

1	4.9 V
2	4.8 V
3	0 V

IC506

1	0 V	11	0 V
2	PS	12	PS
3	PS	13	PS
4	PS	14	PS
5	PS	15	PS
6	PS	16	PS
7	PS	17	PS
8	PS	18	PS
9	PS	19	PS
10	0 V	20	4.9 V

IC507

1	PS	13	PS
2	PS	14	PS
3	PS	15	PS
4	PS	16	PS
5	PS	17	PS
6	PS	18	PS
7	PS	19	PS
8	PS	20	PS
9	PS	21	PS
10	PS	22	PS
11	PS	23	PS
12	PS	24	4.9 V

IC509

1	PS
2	PS
3	0 V
4	PS
5	4.9 V

IC802

1	13.4 V
2	6.4 V
3	0.5 V
4	5.4 V
5	5.6 V

IC803

1	1.2 V
2	0 V
3	12.7 V

	E	C	B	MODE		E	C	B	MODE
Q504	0 V	PS	PS		Q805	5.3 V	13.4 V	5.6 V	
Q505	0 V	PS	PS		Q806	13.4 V	0 V	13.4 V	
Q506	5 V	PS	PS		Q807	0 V	13.4 V	0 V	
Q507	0 V	PS	PS		Q808	0 V	0 V	9.4 V	
Q518	0 V	4.6V/0V	0V/3.2V	FM/CD	Q809	13.3V	13.3V	12.3 V	
Q567	0 V	4.9V	0 V		Q810	13.3 V	13.3 V	12.3 V	
Q568	0 V	4.9 V	0 V		Q811	0 V	0.04V	4.2 V	
Q801	11.6V	13.3V	12.2V		Q812	4.8 V	5.6 V	5.4 V	
Q803	0 V	0.1 V	0.7 V		Q814	0 V	9.1V/0V	0V/9.7V	DIMM OFF/ON
Q804	13.5V	13.4 V	12.8 V		Q822	13.5V	8.9 V	12.8 V	

	1	2	3	4	5	6	MODE
Q503	13.2V/0V	0V/13.2V	13.2V	0V/1.9V	0 V		MUTE OFF/ON
Q591	4.8 V	4.8 V	4.8 V	0 V	0 V	0 V	
Q823	0 V	12.8 V	12.8 V	3 V	0 V		
Q824	0 V	4.9 V	4.9 V	6 2 V	0 V		

〔Measuring Conditions〕

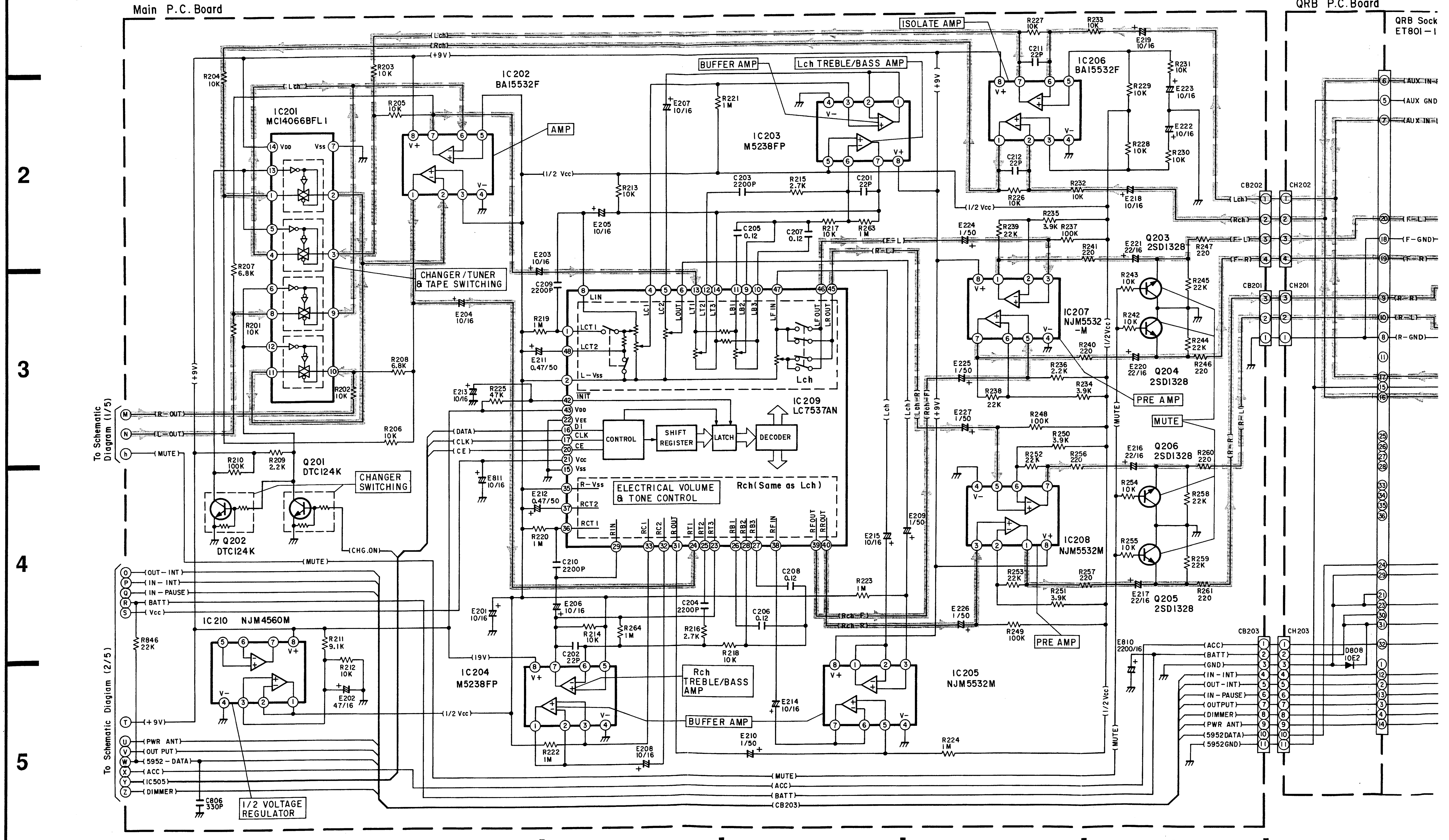
. Power Supply Voltage : DC14.4V
· Measuring Meter : Digital Voltmeter
· Measuring Point Reference : Between GND
· Measuring Conditions : TAPE : No Bias Tape
FM : 98.1MHz (No Signal Input)
MW : 999KHz (No Signal Input)
LW : 216KHz (No Signal Input)

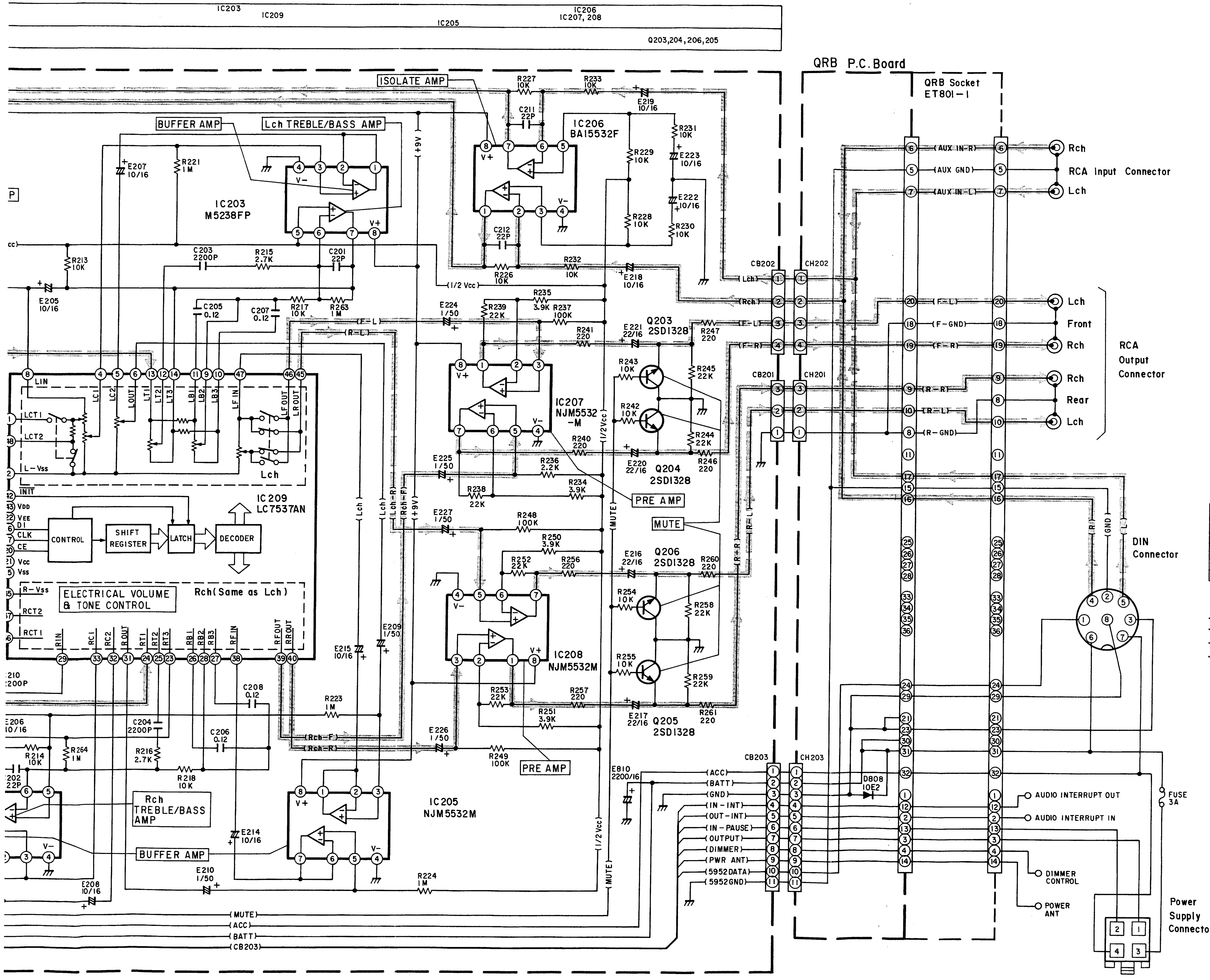
NOTES:

1. All resistance values are in ohms. K = 1,000
2. All capacitance values are in microfarads. P = $\frac{1}{1,000,000}$

Schematic Diagram (3/5)

IC	IC210 IC201	IC204 IC202	IC203 IC209	IC205	IC206 IC207, 208
Transistor (Q)	Q202 Q201				Q203,204,206,205


1
2
3
4
5
Main P.C. Board
QRB P.C. Board
QRB Sock
ET801-1
IC201
MC14066BFL1
IC202
BA15532F
AMP
CHANGER/TUNER
& TAPE SWITCHING
IC203
M5238FP
BUFFER AMP
Lch TREBLE/BASS AMP
ISOLATE AMP
IC206
BA15532F
IC207
NJM5532
-M
IC208
NJM5532M
IC209
LC7537AN
CONTROL
SHIFT
REGISTER
LATCH
DECODER
ELECTRICAL VOLUME
& TONE CONTROL
Rch(Same as Lch)
Lch
Q201
DTC124K
Q202
DTC124K
CHANGER
SWITCHING
IC210 NJM4560M
1/2 VOLTAGE
REGULATOR
IC204
M5238FP
Rch
TREBLE/BASS
AMP
BUFFER AMP
IC205
NJM5532M
Q203
2SD1328
Q204
2SD1328
Q205
2SD1328
Q206
2SD1328
PRE AMP
PRE AMP
MUTE
CB201
CB202
CB203
CH201
CH202
CH203
D808
10E2
E810
2200/16
C806
330P
R846
22K
To Schematic
Diagram (1/5)
To Schematic
Diagram (2/5)
R-OUT
L-OUT
MUTE
OUT-INT
IN-INT
IN-PAUSE
BATT
Vcc
+9V
PWR ANT
OUT PUT
5952-DATA
ACC
IC505
DIMMER
CHG.ON
DATA
CLK
CE
19V
1/2 Vcc
Lch
Rch
F-L
R-L
F-R
R-R
Rch-F
Rch-R
ACC
BATT
GND
IN-INT
OUT-INT
IN-PAUSE
OUTPUT
DIMMER
PWR ANT
5952DATA
5952GND
AUX IN
AUX GND
F-GND
R-GND
CB203


IC203
IC209
IC205
IC206
IC207, 208
Q203,204,206,205
QRB P.C.Board
QRB Socket ET801-1
ISOLATE AMP
BUFFER AMP
Lch TREBLE/BASS AMP
IC206 BA15532F
IC203 M5238FP
IC207 NJM5532-M
IC208 NJM5532M
IC205 NJM5532M
IC209 LC7537AN
Q203 2SD1328
Q204 2SD1328
Q205 2SD1328
Q206 2SD1328
PRE AMP
MUTE
CONTROL
SHIFT REGISTER
LATCH
DECODER
ELECTRICAL VOLUME & TONE CONTROL
Rch(Same as Lch)
Rch TREBLE/BASS AMP
BUFFER AMP
CB202
CH202
CB201
CH201
CB203
CH203
D808 10E2
E810 2200/16
Rch
RCA Input Connector
Lch
Lch
Front
Rch
RCA Output Connector
Rch
Rear
Lch
DIN Connector
AUDIO INTERRUPT OUT
AUDIO INTERRUPT IN
FUSE 3A
DIMMER CONTROL
POWER ANT
Power Supply Connector
(AUX IN-R)
(AUX GND)
(AUX IN-L)
(F-L)
(F-GND)
(F-R)
(R-R)
(R-L)
(R-GND)
(ACC)
(BATT)
(GND)
(IN-INT)
(OUT-INT)
(IN-PAUSE)
(OUTPUT)
(DIMMER)
(PWR ANT)
(5952DATA)
(5952GND)
(MUTE)
(ACC)
(BATT)
(CB203)
(1/2 Vcc)
(+9V)
(Lch)
(Rch)
(Lch-R)
(Rch-F)
(Rch-R)

IC201		
1	4.7 V	
2	4.7 V	
3	4.7 V	
4	4.7 V	
5	0V/8.8V	CHANGER OFF/ON
6	8.1V/0V	Others OFF/ON
7	0 V	
8	4.6 V	
9	4.6 V	
10	4.6 V	
11	4.6 V	
12	8.1V/0V	Others OFF/ON
13	0V/8.8V	CHANGER OFF/ON
14	8.9 V	

IC202	
1	4.8 V
2	4.6 V
3	4.6 V
4	0 V
5	4.6 V
6	4.7 V
7	4.8 V
8	8.9 V

IC203	
1	4.6 V
2	4.6 V
3	4.6 V
4	0 V
5	4.6 V
6	4.6 V
7	4.6 V
8	8.9 V

IC204	
1	4.6 V
2	4.6 V
3	4.6 V
4	0 V
5	4.6 V
6	4.6 V
7	4.6 V
8	8.9 V

IC205	
1	4.5 V
2	4.5 V
3	4.1 V
4	0 V
5	4.1 V
6	4.5 V
7	4.5 V
8	8.9 V

IC206	
1	4.6 V
2	4.6 V
3	4.6 V
4	0 V
5	4.6 V
6	4.6 V
7	4.6 V
8	8.9 V

IC207	
1	4.5 V
2	4.6 V
3	4.6 V
4	0 V
5	4.6 V
6	4.6 V
7	4.5 V
8	8.9 V

IC208	
1	4.5 V
2	4.6 V
3	4.6 V
4	0 V
5	4.6 V
6	4.6 V
7	4.5 V
8	8.9 V

IC210	
1	4.6 V
2	4.6 V
3	4.6 V
4	0 V
5	3.5 V
6	3.3 V
7	8.5 V
8	8.9 V

IC209

1	4.2 V	13	4.6 V	25	4.6 V	37	4.6 V
2	4.6 V	14	4.6 V	26	4.6 V	38	4.6 V
3	0 V	15	0 V	27	4.6 V	39	0 V
4	4.6 V	16	0 V	28	4.6 V	40	4.6 V
5	4.6 V	17	0 V	29	4.6 V	41	0 V
6	4.6 V	18	0 V	30	0 V	42	8.8 V
7	0 V	19	8.9 V	31	4.6 V	43	8.9 V
8	4.6 V	20	0 V	32	4.6 V	44	0 V
9	4.6 V	21	5.3 V	33	4.6 V	45	4.6 V
10	4.6 V	22	0 V	34	0 V	46	4.6 V
11	4.6 V	23	4.6 V	35	0 V	47	4.6 V
12	4.6 V	24	4.6 V	36	4.2 V	48	4.6 V

	E	C	B	MODE
Q201	0V	8.1V/0V	0V/3.7V	CHANGER OFF/ON
Q202	0V	0V/8.8V	8.1V/0V	CHANGER OFF/ON
Q203	0V	0V	0.7V	
Q204	0V	0V	0.7V	
Q205	0V	0V	0.7V	
Q206	0V	0V	0.7V	

〔Measuring Conditions〕

- Power Supply Voltage : DC14.4V
- Measuring Meter : Digital Voltmeter
- Measuring Point Reference : Between GND
- Measuring Conditions : TAPE : No Bias Tape

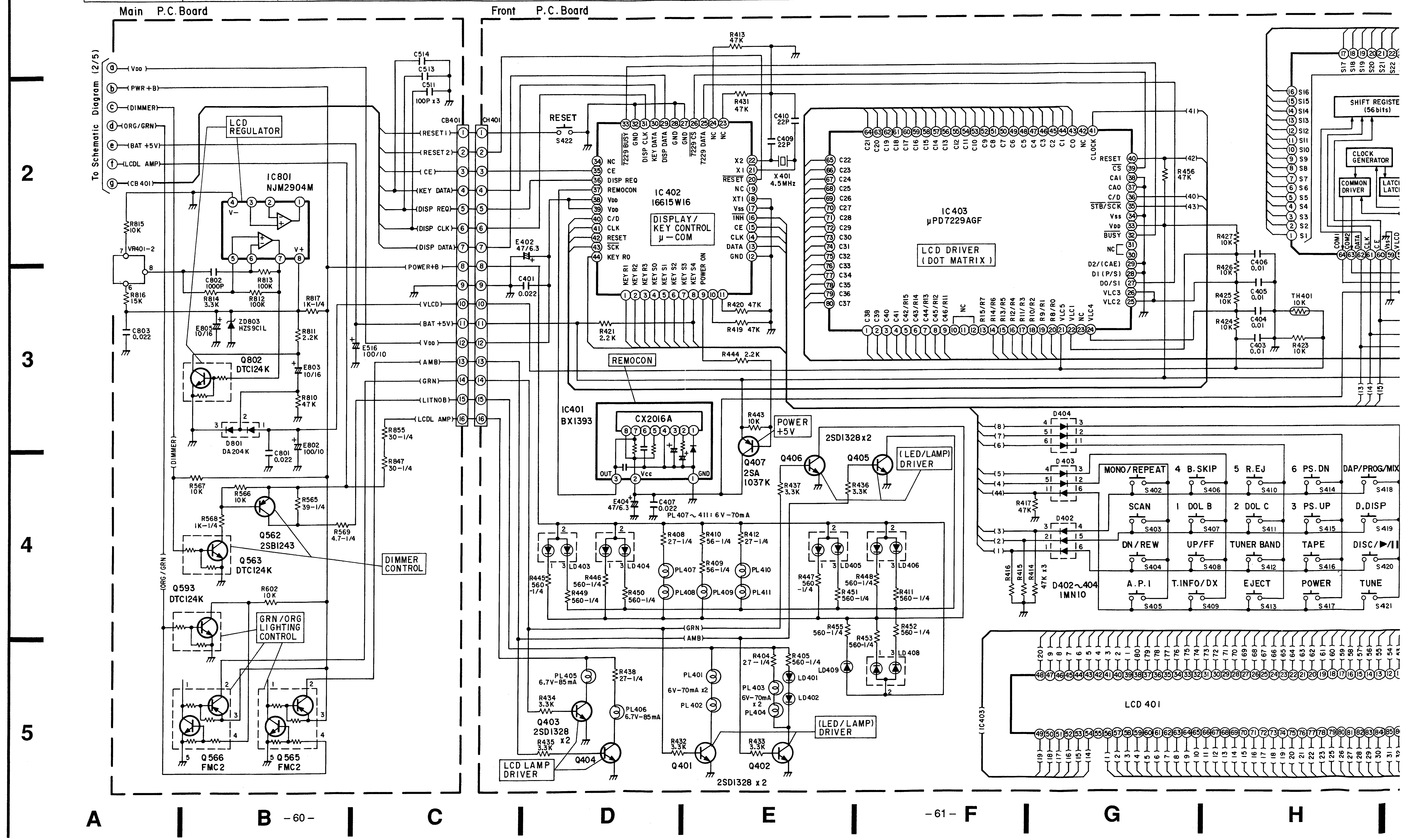
FM : 98.1MHz (No Signal Input)
MW : 999KHz (No Signal Input)
LW : 216KHz (No Signal Input)

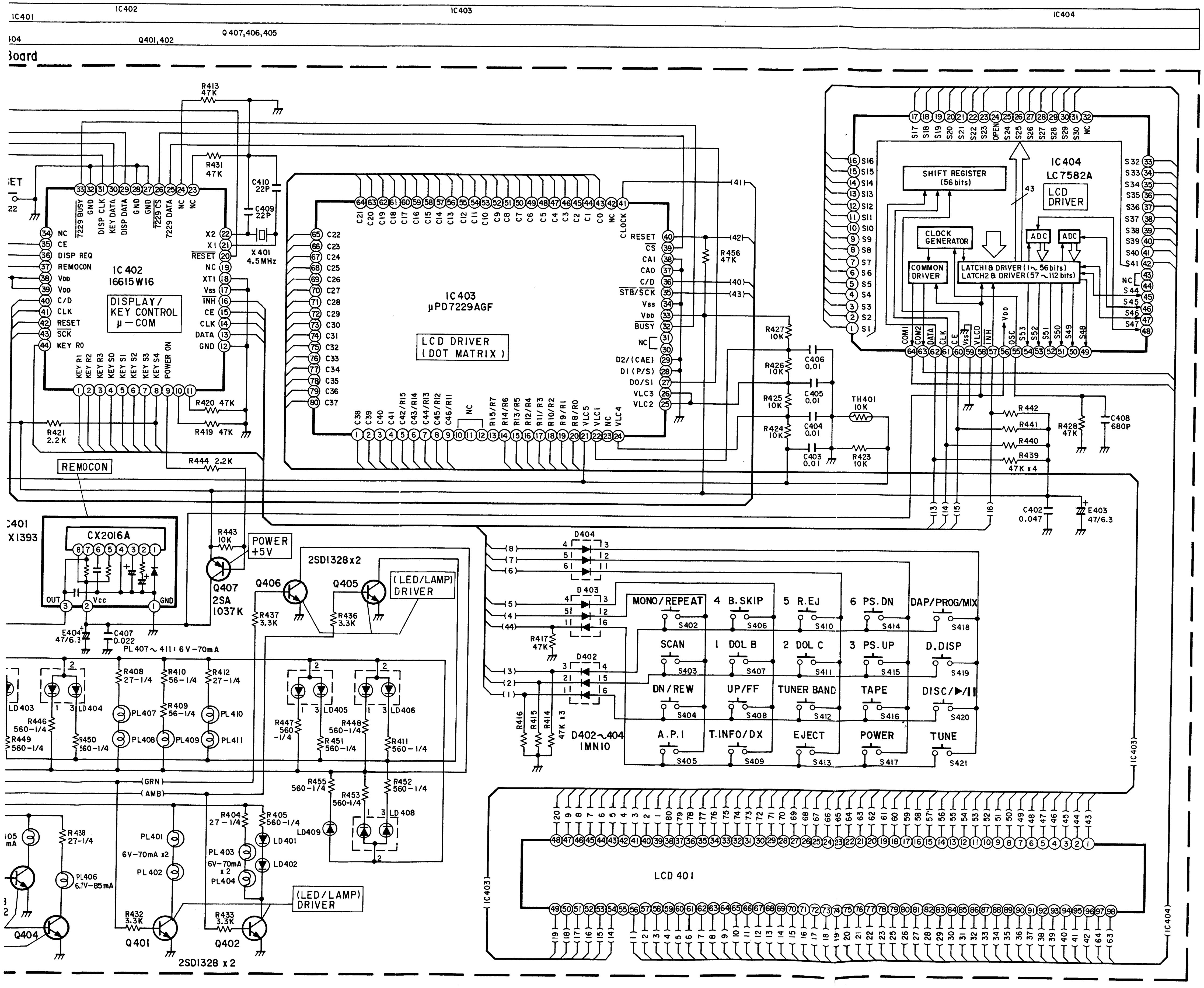
NOTES:

1. All resistance values are in ohms. K = 1,000
2. All capacitance values are in microfarads. $P = \frac{1}{1,000,000}$

Schematic Diagram (4/5)

IC			IC801	IC401	IC402		IC403
Transistor (Q)	Q593	Q802	Q562,563,566,565	Q403,404	Q401,402	Q407,406,405	


1
2
3
4
5
Main P.C. Board
Front P.C. Board
To Schematic Diagram (2/5)
(VDD)
(PWR+B)
(DIMMER)
(ORG/GRN)
(BAT +5V)
(LCDL AMP)
(CB401)
LCD REGULATOR
IC801
NJM2904M
R815 10K
VR401-2
R816 15K
C803 0.022
C802 1000P
R814 3.3K
R813 100K
R812 100K
R817 1K-1/4
E805 10/16
ZD803 HZS9C1L
R811 2.2K
E803 10/16
Q802 DTC124K
R810 47K
D801 DA204K
C801 0.022
E802 100/10
R567 10K
R566 10K
R565 39-1/4
R568 1K-1/4
Q562 2SB1243
R569 4.7-1/4
Q563 DTC124K
DIMMER CONTROL
Q593 DTC124K
R602 10K
GRN/ORG LIGHTING CONTROL
Q566 FMC2
Q565 FMC2
(DIMMER)
(ORG/GRN)
C514
C513
C511 100P x3
CB401
CH401
(RESET1)
(RESET2)
(CE)
(KEY DATA)
(DISP REQ)
(DISP CLK)
(DISP DATA)
(POWER+B)
(VLCD)
(BAT +5V)
(VDD)
(AMB)
(GRN)
(LITNOB)
(LCDL AMP)
E516 100/10
R855 30-1/4
R847 30-1/4
E402 47/6.3
C401 0.022
RESET
S422
R413 47K
R431 47K
C410 22P
C409 22P
X401 4.5MHz
IC402
16615W16
DISPLAY/KEY CONTROL μ-COM
7229 BUSY
GND
DISP CLK
KEY DATA
DISP DATA
7229 CS
7229 DATA
NC
DISP REQ
REMOCON
VDD
C/D
CLK
RESET
SCK
KEY R0
KEY R1
KEY R2
KEY R3
KEY S0
KEY S1
KEY S2
KEY S3
KEY S4
POWER ON
X2
X1
XT1
VSS
INH
CE
DATA
R420 47K
R419 47K
R421 2.2K
R444 2.2K
REMOCON
IC401 BX1393
CX2016A
OUT
Vcc
GND
E404 47/6.3
C407 0.022
PL407~411: 6V-70mA
R443 10K
POWER +5V
Q407 2SA1037K
2SD1328 x2
Q406
Q405
(LED/LAMP) DRIVER
R437 3.3K
R436 3.3K
LD403
LD404
LD405
LD406
R408 27-1/4
R410 56-1/4
R412 27-1/4
R409 56-1/4
PL407
PL408
PL409
PL410
PL411
R445 560-1/4
R446 560-1/4
R449 560-1/4
R450 560-1/4
R447 560-1/4
R448 560-1/4
R451 560-1/4
R411 560-1/4
R455 560-1/4
R453 560-1/4
R452 560-1/4
LD409
LD408
(GRN)
(AMB)
PL405 6.7V-85mA
R438 27-1/4
PL406 6.7V-85mA
R434 3.3K
Q403 2SD1328 x2
R435 3.3K
Q404
LCD LAMP DRIVER
PL401
6V-70mA x2
PL402
R404 27-1/4
R405 560-1/4
PL403
6V-70mA x2
PL404
LD401
LD402
R432 3.3K
R433 3.3K
Q401
Q402
2SD1328 x2
(LED/LAMP) DRIVER
IC403
μPD7229AGF
LCD DRIVER (DOT MATRIX)
C1–C40
C41/R16
C42/R15
C43/R14
C44/R13
C45/R12
C46/R11
R15/R7
R14/R6
R13/R5
R12/R4
R11/R3
R10/R2
R9/R1
R8/R0
VLC1
VLC2
VLC3
VLC4
VLC5
CLOCK
RESET
CS
CAI
CAO
C/D
STB/SCK
VSS
VDD
BUSY
NC
D2/(CAE)
D1(P/S)
D0/S1
R456 47K
R427 10K
R426 10K
R425 10K
R424 10K
C406 0.01
C405 0.01
C404 0.01
C403 0.01
TH401 10K
R423 10K
(41)
(42)
(40)
(43)
SHIFT REGISTER (56 bits)
CLOCK GENERATOR
COMMON DRIVER
LATCH
S1–S21
COM1
COM2
DATA
CLK
C.E
VSS
VLC
D404
D403
D402
R417 47K
R416
R415
R414
47K x3
D402~404 1MN10
MONO/REPEAT S402
4 B.SKIP S406
5 R.EJ S410
6 PS.DN S414
DAP/PROG/MIX S418
SCAN S403
1 DOL B S407
2 DOL C S411
3 PS.UP S415
D.DISP S419
DN/REW S404
UP/FF S408
TUNER BAND S412
TAPE S416
DISC/▶/II S420
A.P.I S405
T.INFO/DX S409
EJECT S413
POWER S417
TUNE S421
LCD 401
(IC403)
A
B
C
D
E
F
G
H


IC401
IC402
IC403
IC404
Q401,402
Q407,406,405
Board
R413 47K
R431 47K
C410 22P
C409 22P
X401 4.5MHz
IC402
16615W16
DISPLAY/KEY CONTROL μ-COM
NC
CE
DISP REQ
REMOCON
VDD
VDD
C/D
CLK
RESET
SCK
KEY R0
7229 BUSY
GND
DISP CLK
KEY DATA
DISP DATA
GND
GND
7229 CS
7229 DATA
NC
NC
X2
X1
RESET
XT1
VSS
INH
CE
CLK
DATA
GND
KEY R1
KEY R2
KEY R3
KEY S0
KEY S1
KEY S2
KEY S3
KEY S4
POWER ON
R420 47K
R419 47K
R421 2.2K
R444 2.2K
REMOCON
IC403
μPD7229AGF
LCD DRIVER (DOT MATRIX)
RESET
CS
CA1
CA0
C/D
STB/SCK
VSS
VDD
BUSY
NC
D2/(CAE)
D1(P/S)
D0/S1
VLC3
VLC2
R456 47K
R427 10K
R426 10K
R425 10K
R424 10K
C406 0.01
C405 0.01
C404 0.01
C403 0.01
TH401 10K
R423 10K
IC404
LC7582A
SHIFT REGISTER (56bits)
LCD DRIVER
CLOCK GENERATOR
COMMON DRIVER
ADC
LATCH1 & DRIVER (1~56bits)
LATCH2 & DRIVER (57~112bits)
COM1
COM2
DATA
CLK
CE
VSS
VLCD
INH
VDD
OSC
R442
R441
R440
R439
47K x4
R428 47K
C408 680P
C402 0.047
E403 47/6.3
C401
X1393
CX2016A
OUT
Vcc
GND
E404 47/6.3
C407 0.022
PL407~411: 6V-70mA
R443 10K
POWER +5V
Q407
2SA1037K
2SD1328x2
Q406
Q405
(LED/LAMP) DRIVER
R437 3.3K
R436 3.3K
D404
D403
D402
R417 47K
R416
R415
R414
47K x3
D402~404
1MN10
MONO/REPEAT
S402
4 B.SKIP
S406
5 R.EJ
S410
6 PS.DN
S414
DAP/PROG/MIX
S418
SCAN
S403
1 DOL B
S407
2 DOL C
S411
3 PS.UP
S415
D.DISP
S419
DN/REW
S404
UP/FF
S408
TUNER BAND
S412
TAPE
S416
DISC/▶/II
S420
A.P.I
S405
T.INFO/DX
S409
EJECT
S413
POWER
S417
TUNE
S421
LD403
LD404
R446 560-1/4
R449 560-1/4
R450 560-1/4
R408 27-1/4
R410 56-1/4
R412 27-1/4
R409 56-1/4
PL407
PL408
PL409
PL410
PL411
LD405
LD406
R447 560-1/4
R448 560-1/4
R451 560-1/4
R411 560-1/4
(GRN)
(AMB)
R455 560-1/4
R453 560-1/4
R452 560-1/4
LD408
LD409
R438 27-1/4
PL406 6.7V-85mA
PL401
6V-70mA x2
PL402
R404 27-1/4
R405 560-1/4
LD401
LD402
PL403
6V-70mA x2
PL404
(LED/LAMP) DRIVER
R432 3.3K
R433 3.3K
Q404
Q401
Q402
2SD1328 x 2
LCD 401
(IC403)
(IC404)

IC402

1	PS	23	PS
2	PS	24	PS
3	PS	25	PS
4	PS	26	PS
5	PS	27	PS
6	PS	28	PS
7	PS	29	PS
8	PS	30	PS
9	0.1 V	31	PS
10	PS	32	PS
11	PS	33	PS
12	PS	34	PS
13	PS	35	PS
14	PS	36	PS
15	PS	37	PS
16	PS	38	PS
17	PS	39	PS
18	PS	40	PS
19	PS	41	PS
20	PS	42	PS
21	PS	43	PS
22	PS	44	PS

IC403

1	PS	28	PS	55	PS
2	PS	29	PS	56	PS
3	PS	30	PS	57	PS
4	PS	31	PS	58	PS
5	PS	32	PS	59	PS
6	PS	33	4.9 V	60	PS
7	PS	34	PS	61	PS
8	PS	35	PS	62	PS
9	PS	36	PS	63	PS
10	PS	37	PS	64	PS
11	PS	38	PS	65	PS
12	PS	39	PS	66	PS
13	PS	40	0.1 V	67	PS
14	PS	41	PS	68	PS
15	PS	42	PS	69	PS
16	PS	43	PS	70	PS
17	PS	44	PS	71	PS
18	PS	45	PS	72	PS
19	PS	46	PS	73	PS
20	PS	47	PS	74	PS
21	1.5 V	48	PS	75	PS
22	3.3 V	49	PS	76	PS
23	PS	50	PS	77	PS
24	0.1 V	51	PS	78	PS
25	1.7 V	52	PS	79	PS
26	1.7 V	53	PS	80	PS
27	PS	54	PS		

IC401

1	0V
2	4.9V
3	PS

IC404

1	PS	23	PS	45	PS
2	PS	24	PS	46	PS
3	PS	25	PS	47	PS
4	PS	26	PS	48	PS
5	PS	27	PS	49	PS
6	PS	28	PS	50	PS
7	PS	29	PS	51	PS
8	PS	30	PS	52	PS
9	PS	31	PS	53	PS
10	PS	32	PS	54	PS
11	PS	33	PS	55	PS
12	PS	34	PS	56	4.9 V
13	PS	35	PS	57	PS
14	PS	36	PS	58	4.9 V
15	PS	37	PS	59	PS
16	PS	38	PS	60	PS
17	PS	39	PS	61	PS
18	PS	40	PS	62	PS
19	PS	41	PS	63	PS
20	PS	42	PS	64	PS
21	PS	43	PS		
22	PS	44	PS		

IC801

1	NC
2	NC
3	NC
4	0 V
5	PS
6	PS
7	PS
8	8.6 V

	E	C	B	MODE
Q562	11.5 V	11.5V/9.2V	10.8V/11.5V	DIMM OFF/ON
Q563	0V	0V/11.5V	9.2V/0V	DIMM OFF/ON
Q593	0 V	9V/0V	0V/4.8V	GRN/ORG
Q802	0V	PS	PS	
Q401	0V	11.2V/0.1V	0V/0.8V	GRN/ORG
Q402	0V	11.2V/0.1V	0V/0.8V	ORG/GRN
Q403	0V	11.2V/0.1V	0V/0.8V	GRN/ORG
Q404	0V	11.2V/0.1V	0V/0.8V	ORG/GRN
Q405	0V	11.2V/0.1V	0V/0.8V	ORG/GRN
Q406	0 V	11.2V/0.1V	0V/0.8V	GRN/ORG
Q407	4.9V	4.9V	4.2V	

	1	2	3	4	5
Q565	0V	13.2V	13V	4.8V	0V
Q566	0V	13.2V	13.3V	9V	0V

〔Measuring Conditions〕

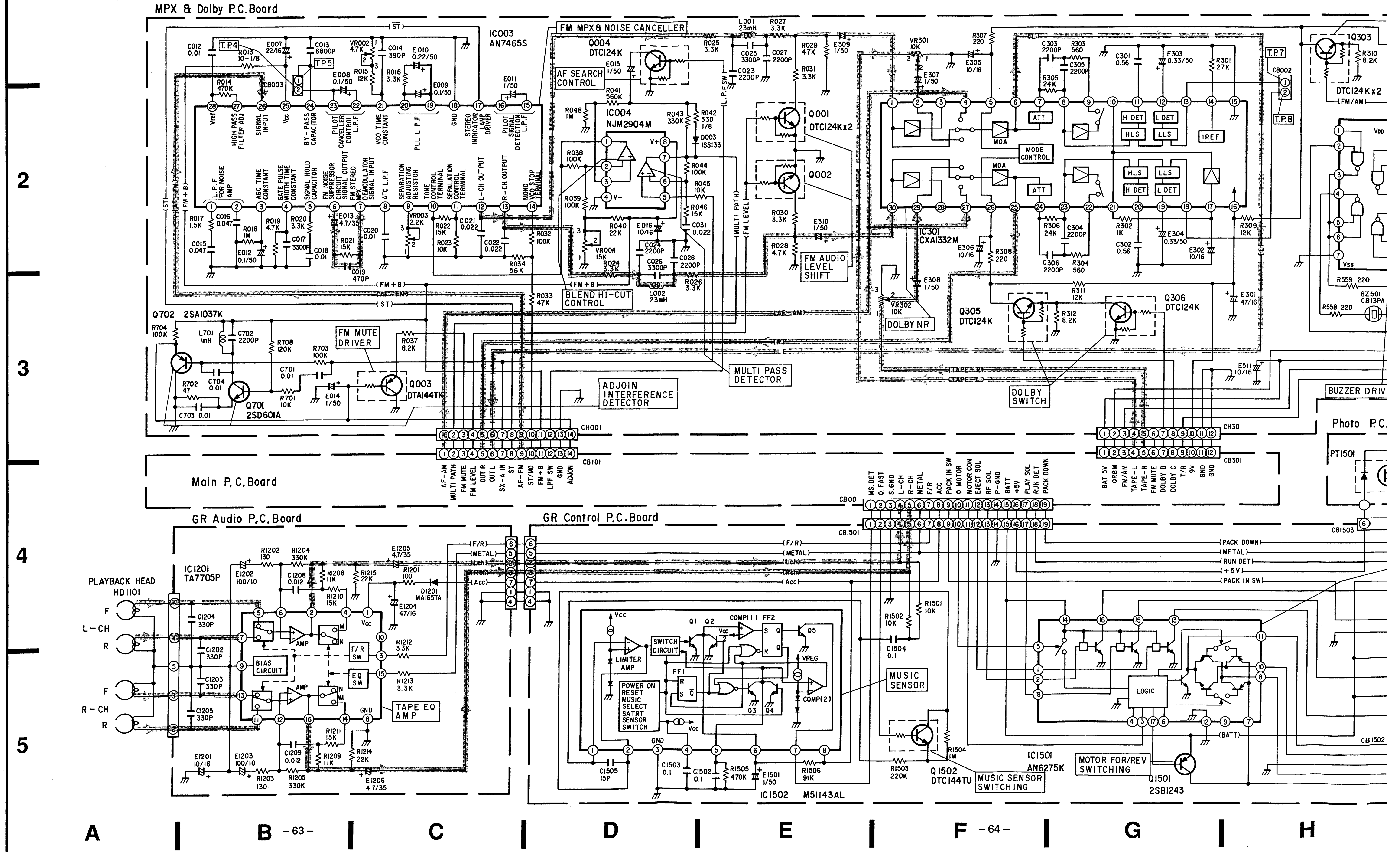
- Power Supply Voltage : DC14.4V
- Measuring Meter : Digital Voltmeter
- Measuring Point Reference : Between GND
- Measuring Conditions : TAPE : No Bias Tape
  FM : 98.1MHz (No Signal Input)
  MW : 999KHz (No Signal Input)
  LW : 216KHz (No Signal Input)

NOTES:

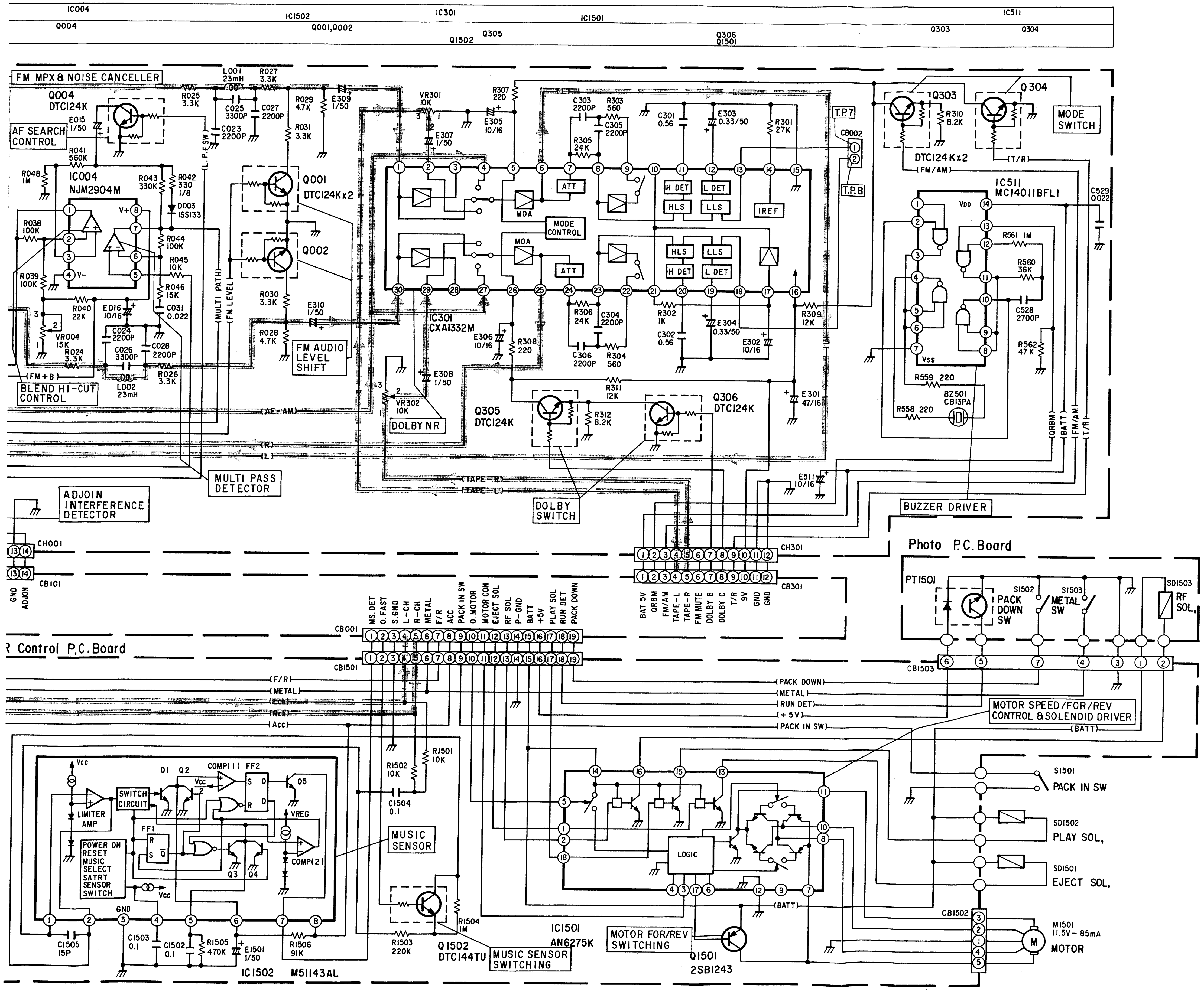
1. All resistance values are in ohms. K = 1,000
2. All capacitance values are in microfarads. $P = \frac{1}{1,000,000}$

Schematic Diagram (5/5)

IC	IC1201 IC003 IC004 IC1502 IC301 IC1501
Transistor (Q)	Q702 Q701 Q003 Q004 Q001,Q002 Q1502 Q305 Q306 Q1501 Q303



1
2
3
4
5
A
B
C
D
E
F
G
H
MPX & Dolby P.C. Board
IC003 AN7465S
FM MPX & NOISE CANCELLER
Q004 DTC124K
AF SEARCH CONTROL
IC004 NJM2904M
Q001 DTC124Kx2
Q002
FM AUDIO LEVEL SHIFT
IC301 CXA1332M
Q303
DTC124Kx2
T.P.4
T.P.5
T.P.7
T.P.8
CB003
CB002
BLEND HI-CUT CONTROL
MULTI PASS DETECTOR
DOLBY NR
DOLBY SWITCH
Q305 DTC124K
Q306 DTC124K
Q702 2SA1037K
Q701 2SD601A
FM MUTE DRIVER
Q003 DTA144TK
ADJOIN INTERFERENCE DETECTOR
CH001
CB101
CH301
CB301
BUZZER DRIV
Photo P.C.
PT1501
BZ501 CB13PA
Main P.C. Board
AF-AM
MULTI PATH
FM MUTE
FM LEVEL
OUT R
OUT L
SX-A IN
ST
AF-FM
ST/MO
FM+B
LPF SW
GND
ADJOIN
MS.DET
O.FAST
S.GND
L-CH
R-CH
METAL
F/R
ACC
PACK IN SW
O.MOTOR
MOTOR CON
EJECT SOL
RF SOL
P-GND
BATT
+5V
PLAY SOL
RUN DET
PACK DOWN
BAT 5V
QRBM
FM/AM
TAPE-L
TAPE-R
FM MUTE
DOLBY B
DOLBY C
T/R
9V
GND
GND
CB001
CB1501
CB1503
GR Audio P.C. Board
GR Control P.C. Board
PLAYBACK HEAD HD1101
L-CH
R-CH
IC1201 TA7705P
BIAS CIRCUIT
F/R SW
EQ SW
TAPE EQ AMP
IC1502 M51143AL
LIMITER AMP
SWITCH CIRCUIT
POWER ON RESET MUSIC SELECT SATRT SENSOR SWITCH
MUSIC SENSOR
Q1502 DTC144TU
MUSIC SENSOR SWITCHING
IC1501 AN6275K
LOGIC
MOTOR FOR/REV SWITCHING
Q1501 2SB1243


IC004
Q004
IC1502
Q001,Q002
IC301
Q1502
Q305
IC1501
Q306
Q1501
Q303
IC511
Q304
FM MPX & NOISE CANCELLER
Q004
DTC124K
AF SEARCH CONTROL
IC004
NJM2904M
Q001
DTC124Kx2
Q002
FM AUDIO LEVEL SHIFT
BLEND HI-CUT CONTROL
MULTI PASS DETECTOR
ADJOIN INTERFERENCE DETECTOR
IC301
CXA1332M
VR302
10K
DOLBY NR
Q305
DTC124K
Q306
DTC124K
DOLBY SWITCH
MODE CONTROL
MOA
ATT
H DET
L DET
HLS
LLS
IREF
T.P.7
T.P.8
CB002
Q303
Q304
DTC124Kx2
MODE SWITCH
IC511
MC14011BFL1
BZ501
CB13PA
BUZZER DRIVER
CH001
CB101
CH301
CB301
CB001
CB1501
BAT 5V
QRBM
FM/AM
TAPE-L
TAPE-R
FM MUTE
DOLBY B
DOLBY C
T/R
9V
GND
MS.DET
O.FAST
S.GND
L-CH
R-CH
METAL
F/R
ACC
PACK IN SW
O.MOTOR
MOTOR CON
EJECT SOL
RF SOL
P-GND
BATT
+5V
PLAY SOL
RUN DET
PACK DOWN
Photo P.C.Board
PT1501
S1502
PACK DOWN SW
S1503
METAL SW
SD1503
RF SOL.
CB1503
Control P.C.Board
MOTOR SPEED/FOR/REV CONTROL & SOLENOID DRIVER
MUSIC SENSOR
IC1502
M51143AL
Q1502
DTC144TU
MUSIC SENSOR SWITCHING
IC1501
AN6275K
LOGIC
MOTOR FOR/REV SWITCHING
Q1501
2SB1243
S1501
PACK IN SW
SD1502
PLAY SOL.
SD1501
EJECT SOL.
CB1502
M1501
11.5V- 85mA
MOTOR
D
E
F
G
H
I
J
K

IC004

1	5.1 V
2	2.6 V
3	2.6 V
4	0 V
5	5.2 V
6	5.2 V
7	5.2 V
8	8.9 V

IC003

1	2.5 V	15	PS	
2	1.8 V	16	PS	
3	1.4 V	17	0.6 V	ST
4	0V	18	0V	
5	2.5 V	19	2.5 V	
6	1.3 V	20	2.5 V	
7	1.2 V	21	1.4 V	
8	1.9 V	22	2.5 V	
9	0.2 V	23	2.5 V	
10	5 V	24	2.5 V	
11	2 V	25	8.8 V	
12	2.6 V	26	2.5 V	
13	2.6 V	27	2.4 V	
14	0 V	28	2.5 V	

IC301

1	4.5 V		16	9 V	
2	4.5 V		17	4.5 V	
3	4.5 V		18	4.5 V	
4	0V/5.2V/8V	T/R FM/AM	19	0.4 V	
5	4.5 V		20	0.4 V	
6	4.5 V		21	4.5 V	
7	4.5 V		22	4.5 V	
8	4.5 V		23	4.5 V	
9	4.5 V		24	4.5 V	
10	4.5 V		25	4.5 V	
11	0 V		26	0V/4.2V/8V	OFF/B/C
12	0.4 V		27	4.5 V	
13	4.5 V		28	4.5 V	
14	1.3 V		29	4.5 V	
15	0 V		30	4.5 V	

IC511

1	1.9 V	8	4.9 V
2	0 V	9	4.9 V
3	4.9 V	10	0 V
4	0 V	11	4.9 V
5	4.9 V	12	4.4 V
6	4.9 V	13	0 V
7	0 V	14	4.9 V

IC1502

1	1.41 V
2	1.38V
3	0 V
4	1.31 V
5	0.02 V
6	0.02 V
7	0.05 V
8	14.01V

IC1501

1	0 V	10	13.9 V
2	0 V	11	8.1 V
3	5.1 V	12	0 V
4	0 V	13	14 V
5	5.1 V	14	14 V
6		15	0.2 V
7	13.9 V	16	14 V
8	8.2 V	17	13.2 V
9	NC	18	5.1 V

IC1201

1	13.1 V	9	2.9 V
2	3.1V	10	
3	4.9 V	11	2.9 V
4	3.1 V	12	2.9 V
5	2.9 V	13	2.9 V
6	2.9 V	14	3.1 V
7	2.9 V	15	0.1 V
8	0 V	16	3.1 V

	E	C	B	MODE
Q001	0V	1.1 V	0V	
Q002	0 V	1.1 V	0 V	
Q003	4V/0V	0 V	5.6V/0.5V	FM MUTE
Q004	0V	0V	9V	
Q303	2.8V/0V	5.2V/8.2V	4V/0V	FM/AM
Q304	0V	5.2V/0V	0V/4.2V	
Q305	0V	0V/8V	4.6V/0V	OFF/DbC
Q306	0 V	0V/3.6V	4.5V/0V	OFF/DbB
Q701	0.9 V	8.5 V	1.5 V	
Q702	5.6 V	0V	5V	
Q1501	14V	13.9 V	13.2 V	
Q1502	1.4 V	1.38 V	0V	

〔Measuring Conditions〕

. Power Supply Voltage : DC14.4V
- Measuring Meter : Digital Voltmeter
- Measuring Point Reference : Between GND
- Measuring Conditions : TAPE : No Bias Tape

FM : 98.1MHz (No Signal Input)
MW : 999KHz (No Signal Input)
LW : 216KHz (No Signal Input)

NOTES:

1. All resistance values are in ohms. K = 1,000
2. All capacitance values are in microfarads. $P = \frac{1}{1{,}000{,}000}$

Electrical Parts List

Resistor Carbon resistors under 1/4 watts are not mentioned in the parts list, please confirm them by schematic diagram.

Capacitor μF = microfarads, pF = picofarads

Abbreviations

RES. =	Resistor	CAP =	Capacitor
C.F =	Carbon Film	ELY =	Electrolytic
M.F =	Metal Film	CER. =	Ceramic
M.O. =	Metal Oxide Film	MYL. =	Mylar
M.P =	Metal Plate	TAN. =	Tantalum
TR. =	Transistor	POLY =	Polystyrol
TRANS. =	Transformer	PP =	Polypropylene
CP =	Chip	PLT =	Polyethylene
		PF =	Polyester Film

Symbol No.	Part No.	Description
Main P. C. Board		
IC's		
IC001	51T35502W02	LA2230
IC002	51T35503W02	LC7073M
IC005	51T93532F07	TC4S66F
IC201	51T40941U03	MC14066BFL1
IC202	51T25154W01	BA15532F
IC203	51T80136F04	M5238FP
IC204	51T80136F04	M5238FP
IC205	51T93335F01	NJM5532M
IC206	51T25154W01	BA15532F
IC207	51T93335F01	NJM5532M
IC208	51T93335F01	NJM5532M
IC209	51T72016F02	LC7537AN
IC210	51T93337F01	NJM4560M
IC501	51T25699W27	25699W27
IC503	51T93332F01	NJM2903M
IC504	51T95014F13	S-8052HNM-CR
IC505	51T15590W53	15590W53
IC506	51T35086W02	μPD74HC373
IC507	51T84723F02	LC3516AML
IC508	51T93532F04	TC4S81F
IC509	51T93532F08	TC4S30F
IC510	51T35504W02	LC7219
IC512	51T68999F03	BU4066BF
IC801	51T93333F01	NJM2904M
IC802	51T15268W03	L78LR05DFA
IC803	51T90890F01	M5236ML
Transistors		
Q005	48T62966F03	CP., DTA124
Q201	48T62967F03	CP., DTC124K
Q202	48T62967F03	CP., DTC124K
Q203	48T63788F01	CP., 2SD1328
Q204	48T63788F01	CP., 2SD1328
Q205	48T63788F01	CP., 2SD1328
Q206	48T63788F01	CP., 2SD1328
Q501	48T62967F09	CP., DTC114TK
Q502	48T73888F12	CP., FMC2
Q503	48T73888F12	CP., FMC2
Q504	48T62967F03	CP., DTC124K
Q505	48T63417F01	CP., 2SC2412K
Q506	48T62966F04	CP., DTA144
Q507	48T62967F04	CP., DTC144K
Q508	48T90181F05	2SD1993
Q509	48T90181F05	2SD1993
Q510	48T90181F05	2SD1993
Q511	48T90181F05	2SD1993
Q512	48T62967F03	CP., DTC124K
Q513	48T62967F03	CP., DTC124K
Q514	48T62967F03	CP., DTC124K
Q515	48T62967F03	CP., DTC124K
Q516	48T73888F12	CP., FMC2
Q517	48T62967F03	CP., DTC124K
Q518	48T62967F03	CP., DTC124K
Q519	48T62967F03	CP., DTC124K
Q520	48T62966F03	CP., DTA124
Q521	48T73888F12	CP., FMC2
Q562	48T84366F01	2SB1243
Q563	48T62967F03	CP., DTC124K
Q564	48T62967F09	CP., DTC114TK
Q565	48T73888F12	CP., FMC2
Q566	48T73888F12	CP., FMC2
Q567	48T62967F03	CP., DTC124K
Q568	48T62967F03	CP., DTC124K
Q591	48T16335W03	CP., IMD2
Q592	48T62967F22	CP., DTC144TK
Q593	48T62967F03	CP., DTC124K
Q801	48T56031F01	2SD1266
Q802	48T62967F03	CP., DTC124K
Q803	48T63417F01	CP., 2SC2412K
Q804	48T84366F01	2SB1243
Q805	48T83617F03	2SD1863
Q806	48T63420F01	CP., 2SA1037K
Q807	48T62967F03	CP., DTC124K
Q808	48T62967F03	CP., DTC124K
Q809	48T84366F01	2SB1243
Q810	48T84366F01	2SB1243
Q811	48T62967F03	CP., DTC124K
Q812	48T62967F06	CP., DTC114YK
Q814	48T62967F03	CP., DTC124K
Q815	48T84366F01	2SB1243
Q816	48T84366F01	2SB1243
Q817	48T62967F03	CP., DTC124K

Symbol No.	Part No.	Description
Q818	48T15289W01	2SD2008
Q819	48T83415F03	2SD1858
Q820	48T63420F01	CP., 2SA1037K
Q821	48T62967F03	CP., DTC124K
Q822	48T69177F02	2SA1358
Q823	48T73888F12	CP., FMC2
Q824	48T73888F12	CP., FMC2

Diodes

Symbol No.	Part No.	Description
D001	48T68828F01	1SS133
D101	48T68828F01	1SS133
D501	48T70933F01	1SS136
D502	48T52446F01	CP., MA151WK
D503	48T68828F01	1SS133
D504	48T25664W01	RB100A
D505	48T68828F01	1SS133
D506	48T52446F01	CP., MA151WK
D507	48T52446F01	CP., MA151WK
D508	48T52446F01	CP., MA151WK
D509	48T68828F01	ISS332
D510	48T52446F01	CP., MA151WK
D511	48T52446F01	CP., MA151WK
D513	48T52446F01	CP., MA151WK
D801	48T64134F01	CP., DA204K
D802	48T64134F01	CP., DA204K
D803	48T81044F01	10E2
D804	48T70933F01	1SS136
D805	48T70933F01	1SS136
D806	48T68828F01	1SS133
D807	48T68828F01	1SS133
D810	48T16617W01	CP., 1SS332
D899	48T44813F02	MA165
ZD501	48T83128F20	Zener, HZS9A2L
ZD502	48T90517F26	Zener, HZS5.6NB1
ZD503	48T90517F26	Zener, HZS5.6NB1
ZD505	48T90517F07	Zener, HZS2.7NB1
ZD801	48T90517F52	Zener, HZS12NB3
ZD803	48T83128F25	Zener, HZS9C1L
ZD804	48T83128F02	Zener, HZS6A2L
ZD805	48T90517F32	Zener, HZS6.8NB1
ZD806	48T83128F26	Zener, HZS9C2L
ZD807	48T83128F01	Zener, HZS6A1L

Crystals

Symbol No.	Part No.	Description
X001	91T15848W01	CER., Lock 4MHz
X002	91T68469F04	CER., Lock 19KHz
X501	91T25773W44	7.37MHz
X502	91T25773W17	4.19MHz
X801	912T5773W43	7.2MHz

Switch

Symbol No.	Part No.	Description
S501	40T16358W02	Slide, SSSS9 (PRE OUT ON / OFF)

Capacitors

Symbol No.	Part No.	Description
C001	08S65128F63	CP., 3300pF
E001	23S61523F05	ELY., 22μF / 6.3V
E002	23S61523F12	ELY., 10μF / 16V
C003	08S65128F63	CP., 3300pF
E003	23S61523F17	ELY., 4.7μF / 25V
C004	08S65128F69	CP., 0.01μF
E004	23S61523F12	ELY., 10μF / 16V
C005	08S65128F43	CP., 220pF
E005	23S61523F07	ELY., 47μF / 6.3V
C006	08S65128F78	CP., 0.022μF
E006	23S61523F29	ELY., 1μF / 50V
C007	08T15399W02	CP., 0.033μF
C008	08S65128F67	CP., 6800pF
C009	08T15399W02	CP., 0.033μF
C010	08S65128F69	CP., 0.01μF
C011	08S65128F69	CP., 0.01μF
C012	08S65128F69	CP., 0.01μF
C013	08S65128F69	CP., 0.01μF
E017	23T25149W04	ELY., 0.47μF / 50V
E018	23S61523F05	ELY., 22μF / 6.3V
C032	08S65128F69	CP., 0.01μF
E099	23S61523F17	ELY., 4.7μF / 25V
E107	23S61523F34	ELY., 100μF / 10V
C201	08S72783F15	CP., 22pF
E201	23T25149W09	ELY., 10μF / 16V
C202	08S72783F15	CP., 22pF
E202	23T45078W12	ELY., 47μF / 16V
C203	08T35388W09	PP., 2200pF
E203	23T25149W09	ELY., 10μF / 16V
C204	08T35388W09	PP., 2200pF
E204	23T25149W09	ELY., 10μF / 16V
C205	08T90316F30	TF, 0.12μF
E205	23T25149W09	ELY., 10μF / 16V
C206	08T90316F30	TF, 0.12μF
E206	23T25149W09	ELY., 10μF / 16V
C207	08T90316F30	TF, 0.12μF
E207	23T25149W09	ELY., 10μF / 16V

Symbol No.	Part No.	Description	
C208	08T90316F30	TF,	0.12μF
E208	23T25149W09	ELY.,	10μF / 16V
C209	08T90316F09	TF,	2200pF
E209	23T25149W05	ELY.,	1μF / 50V
C210	08T90316F09	TF,	2200pF
E210	23T25149W05	ELY.,	1μF / 50V
C211	08S72783F15	CP.,	22pF
E211	23T25149W04	ELY.,	0.47μF / 50V
C212	08S72783F15	CP.,	22pF
E212	23T25149W04	ELY.,	0.47μF / 50V
E213	23T25149W09	ELY.,	10μF / 16V
E214	23T25149W09	ELY.,	10μF / 16V
E215	23T25149W09	ELY.,	10μF / 16V
E216	23T25149W10	ELY.,	22μF / 16V
E217	23T25149W10	ELY.,	22μF / 16V
E218	23T25149W09	ELY.,	10μF / 16V
E219	23T25149W09	ELY.,	10μF / 16V
E220	23T25149W10	ELY.,	22μF / 16V
E221	23T25149W10	ELY.,	22μF / 16V
E222	23T25149W09	ELY.,	10μF / 16V
E223	23T25149W09	ELY.,	10μF / 16V
E224	23T25149W05	ELY.,	1μF / 50V
E225	23T25149W05	ELY.,	1μF / 50V
E226	23T25149W05	ELY.,	1μF / 50V
E227	23T25149W05	ELY.,	1μF / 50V
C501	08S65128F69	CP.,	0.01μF
E501	23S61523F15	ELY.,	47μF / 16V
C502	08S65128F69	CP.,	0.01μF
E502	23S61523F12	ELY.,	10μF / 16V
C503	08S65128F78	CP.,	0.022μF
E503	23S61523F34	ELY.,	100μF / 10V
C504	08S65128F78	CP.,	0.022μF
E504	23S61523F34	ELY.,	100μF / 10V
C505	08S65128F35	CP.,	100pF
E505	23S61523F34	ELY.,	100μF / 10V
C506	08S65128F35	CP.,	100pF
E506	23S61523F12	ELY.,	10μF / 16V
C507	08S65128F35	CP.,	100pF
C508	08S65128F35	CP.,	100pF
E508	23S61523F25	ELY.,	0.1μF / 50V
C509	08S65128F78	CP.,	0.022μF
E509	23S61523F11	ELY.,	47μF / 10V
C510	08S65128F78	CP.,	0.022μF
C511	08S65128F35	CP.,	100pF
E512	23S61523F25	ELY.,	0.1μF / 50V
C513	08S65128F35	CP.,	100pF
E513	23T25149W04	ELY.,	0.47μF / 50V
C514	08S65128F35	CP.,	100pF
E514	23S61523F34	ELY.,	100μF / 10V
C515	08S65128F51	CP.,	470pF
C516	08T90316F29	TF,	0.01μF
E516	23S61523F34	ELY.,	100μF / 10V

Symbol No.	Part No.	Description	
C517	08S65128F69	CP.,	0.01μF
C518	08S65128F61	CP.,	2200pF
C519	08S65128F69	CP.,	0.01μF
C520	08S65128F69	CP.,	0.01μF
C521	08T15399W02	CP.,	0.033μF
C522	08T15399W02	CP.,	0.033μF
C523	08T15399W02	CP.,	0.033μF
C524	08S65128F69	CP.,	0.01μF
C525	08S65128F21	CP.,	27pF
C526	08S65128F21	CP.,	27pF
C527	08S65128F78	CP.,	0.022μF
C530	08S65128F69	CP.,	0.01μF
C531	08S65128F57	CP.,	1000pF
C532	08S65128F69	CP.,	0.01μF
C533	08S65128F69	CP.,	0.01μF
C536	08S65128F35	CP.,	100pF
C537	08S65128F35	CP.,	100pF
C538	08S65128F35	CP.,	100pF
C539	23T82372F19	ELY., (B.P)	2.2μF / 50V
C590	08S65128F19	CP.,	22pF
C591	08S65128F19	CP.,	22pF
C594	08S65128F21	CP.,	27pF
C595	08S65128F21	CP.,	27pF
C601	08T15399W03	CP.,	0.047μF
C801	08S65128F78	CP.,	0.022μF
C802	08S65128F57	CP.,	1000pF
E802	23S61523F34	ELY.,	100μF / 10V
C803	08S65128F78	CP.,	0.022μF
E803	23S61523F12	ELY.,	10μF / 16V
C804	08T15399W03	CP.,	0.047μF
C805	08S65128F69	CP.,	0.01μF
E805	23S61523F12	ELY.,	10μF / 16V
C806	08S65128F47	CP.,	330pF
E806	23T25149W09	ELY.,	10μF / 16V
C807	08S65128F78	CP.,	0.022μF
E807	23S61523F12	ELY.,	10μF / 16V
C808	08S65128F78	CP.,	0.022μF
E808	23S61523F13	ELY.,	22μF / 16V
C809	08S65128F69	CP.,	0.01μF
E809	23S61523F12	ELY.,	10μF / 16V
C810	08S65128F69	CP.,	0.01μF
E810	23T35505W02	ELY.,	2200μF / 16V
E811	23T25149W09	ELY.,	10μF / 16V
E812	23T94181F40	ELY.,	220μF / 10V
E813	23S61523F12	ELY.,	10μF / 16V
E815	23T25149W04	ELY.,	0.47μF / 50V
E816	23T45078W13	ELY.,	100μF / 10V
E819	23S61523F12	ELY.,	10μF / 16V

Symbol No.	Part No.	Description
Resistors (All resistors are chip 1/10W ± 5% unless otherwise noted.)		
R001	06S64996F20	560K ohm
R002	06S64996F28	1.5M ohm
R003	06S64995F53	1K ohm
R004	06S64995F71	5.6K ohm
R005	06S64995F77	10K ohm
R006	06S64995F77	10K ohm
R007	06S64995F77	10K ohm
R008	06S64995F93	47K ohm
R009	06S64995F77	10K ohm
R010	06S64995F85	22K ohm
R011	06S53330F29	100 ohm 1/8W
R012	06S64995F97	68K ohm
R051	06S64995F77	10K ohm
R054	06S64995F53	1K ohm
R055	06S64995F53	1K ohm
R056	06S64995F53	1K ohm
R099	06S64995F65	3.3K ohm
R101	06S64995F69	4.7K ohm
R102	06S64995F93	47K ohm
R103	06S64995F93	47K ohm
R104	06S64995F93	47K ohm
R201	06S64995F77	10K ohm
R202	06S64995F77	10K ohm
R203	06S64995F77	10K ohm
R204	06S64995F77	10K ohm
R205	06S64995F77	10K ohm
R206	06S64995F77	10K ohm
R207	06S64995F73	6.8K ohm
R208	06S64995F73	6.8K ohm
R209	06S64995F61	2.2K ohm
R210	06S64996F02	100K ohm
R211	06S64995F76	9.1K ohm
R212	06S64995F77	10K ohm
R213	06S64995F77	10K ohm
R214	06S64995F77	10K ohm
R215	06S64995F63	2.7K ohm
R216	06S64995F63	2.7K ohm
R217	06S64995F77	10K ohm
R218	06S64995F77	10K ohm
R219	06S64996F26	1M ohm
R220	06S64996F26	1M ohm
R221	06S64996F26	1M ohm
R222	06S64996F26	1M ohm
R223	06S64996F26	1M ohm
R224	06S64996F26	1M ohm
R225	06S64995F93	47K ohm
R226	06S64995F77	10K ohm
R227	06S64995F77	10K ohm
R228	06S64995F77	10K ohm
R229	06S64995F77	10K ohm
R230	06S64995F77	10K ohm
R231	06S64995F77	10K ohm
R232	06S64995F77	10K ohm
R233	06S64995F77	10K ohm
R234	06S64995F67	3.9K ohm
R235	06S64995F67	3.9K ohm
R236	06S64996F02	100K ohm
R237	06S64996F02	100K ohm
R238	06S64995F85	22K ohm
R239	06S64995F85	22K ohm
R240	06S64995F37	220 ohm
R241	06S64995F37	220 ohm
R242	06S64995F77	10K ohm
R243	06S64995F77	10K ohm
R244	06S64995F85	22K ohm
R245	06S64995F85	22K ohm
R246	06S64995F37	220 ohm
R247	06S64995F37	220 ohm
R248	06S64996F02	100K ohm
R249	06S64996F02	100K ohm
R250	06S64995F67	3.9K ohm
R251	06S64995F67	3.9K ohm
R252	06S64995F85	22K ohm
R253	06S64995F85	22K ohm
R254	06S64995F77	10K ohm
R255	06S64995F77	10K ohm
R256	06S64995F37	220 ohm
R257	06S64995F37	220 ohm
R258	06S64995F85	22K ohm
R259	06S64995F85	22K ohm
R260	06S64995F37	220 ohm
R261	06S64995F37	220 ohm
R263	06S64996F26	1M ohm
R264	06S64996F26	1M ohm
R501	06S64995F93	47K ohm
R502	06S64996F02	100K ohm
R503	06S64995F77	10K ohm
R504	06S64995F71	5.6K ohm
R505	06S64995F75	8.2K ohm
R506	06S64995F65	3.3K ohm
R507	06S64995F65	3.3K ohm
R508	06S64995F53	1K ohm
R509	06S64995F51	820 ohm
R510	06S53330F05	10 ohm 1/8W
R511	06S64995F53	1K ohm
R512	06S64995F53	1K ohm
R513	06S64995F37	220 ohm
R514	06S64995F85	22K ohm
R515	06S64995F47	560 ohm
R516	06S64995F71	5.6K ohm
R517	06S64995F85	22K ohm
R518	06S64995F77	10K ohm

Symbol No.	Part No.	Description
R521	06S64995F77	10K ohm
R522	06S64995F77	10K ohm
R523	06S64995F77	10K ohm
R524	06S64995F77	10K ohm
R525	06T70072F53	1K ohm 1/4W
R526	06S64996F02	100K ohm
R527	06S64996F02	100K ohm
R528	06S64995F77	10K ohm
R529	06S64995F77	10K ohm
R530	06S64995F93	47K ohm
R531	06S64996F02	100K ohm
R532	06S64995F93	47K ohm
R534	06S64996F26	1M ohm
R535	06S64995F53	1K ohm
R536	06S64996F02	100K ohm
R537	06S64996F26	1M ohm
R538	06S64996F26	1M ohm
R539	06S64995F76	9.1K ohm
R540	06S64995F77	10K ohm
R541	06S64995F77	10K ohm
R542	06S64995F76	9.1K ohm
R543	06S64995F93	47K ohm
R544	06S64995F93	47K ohm
R546	06S64995F69	4.7K ohm
R547	06S64995F93	47K ohm
R548	06S64995F61	2.2K ohm
R549	06S64995F61	2.2K ohm
R550	06S64995F69	4.7K ohm
R551	06S64995F69	4.7K ohm
R552	06S64995F93	47K ohm
R553	06S64995F93	47K ohm
R554	06S64995F93	47K ohm
R555	06S64995F93	47K ohm
R556	06S64995F83	18K ohm
R557	06S64995F77	10K ohm
R565	06T70072F19	39 ohm 1/4W
R566	06S64995F77	10K ohm
R567	06S64995F77	10K ohm
R568	06T70072F53	1K ohm 1/4W
R569	06T70072F01	4.7 ohm 1/4W
R570	06S64995F93	47K ohm
R571	06S64995F93	47K ohm
R575	06S64995F61	2.2K ohm
R576	06S64995F71	5.6K ohm
R577	06S64995F85	22K ohm
R579	06S64995F93	47K ohm
R580	06S64995F93	47K ohm
R581	06S64995F93	47K ohm
R582	06S64995F93	47K ohm
R583	06S64995F93	47K ohm
R584	06S64995F93	47K ohm
R585	06S64995F85	22K ohm

Symbol No.	Part No.	Description
R586	06S64995F93	47K ohm
R587	06S64995F69	4.7K ohm
R588	06S64995F93	47K ohm
R589	06S64995F93	47K ohm
R590	06S64995F93	47K ohm
R593	06S64995F77	10K ohm
R594	06S64995F41	330 ohm
R595	06S64996F14	330K ohm
R599	06S64995F85	22K ohm
R601	06S64995F77	10K ohm
R602	06S64995F77	10K ohm
R604	06S64996F02	100K ohm
R607	06S64995F93	47K ohm
R612	06S64995F41	330 ohm
R620	06S64996F02	100K ohm
R623	06S64995F93	47K ohm
R624	06S64995F93	47K ohm
R627	06S64995F93	47K ohm
R628	06S64995F93	47K ohm
R629	06S64995F93	47K ohm
R630	06S64995F93	47K ohm
R631	06S64995F93	47K ohm
R632	06S64995F93	47K ohm
R633	06S64995F93	47K ohm
R634	06S64995F53	1K ohm
R635	06S64995F53	1K ohm
R801	06S64995F65	3.3K ohm
R802	06S64995F65	3.3K ohm
R803	06S64995F77	10K ohm
R804	06T70072F53	1K ohm 1/4W
R805	06T70072F53	1K ohm 1/4W
R806	06S64995F77	10K ohm
R807	06S64995F69	4.7K ohm
R808	06S53330F61	2.2K ohm 1/8W
R809	06T70072F45	470 ohm 1/4W
R810	06S64995F93	47K ohm
R811	06S64995F61	2.2K ohm
R812	06S64996F02	100K ohm
R813	06S64996F02	100K ohm
R814	06S64995F65	3.3K ohm
R815	06S64995F77	10K ohm
R816	06S64995F81	15K ohm
R817	06T70072F53	1K ohm 1/4W
R818	06S64995F77	10K ohm
R819	06S64995F77	10K ohm
R820	06T70072F38	240 ohm 1/4W
R821	06T70072F38	240 ohm 1/4W
R822	06S64995F77	10K ohm
R823	06T70072F53	1K ohm 1/4W
R824	06S64995F77	10K ohm
R825	06S53330F61	2.2K ohm 1/8W
R826	06S64995F77	10K ohm

Symbol No.	Part No.	Description
R827	06S64995F77	10K ohm
R828	06T70072F03	6.8 ohm 1/4W
R829	06T70072F03	6.8 ohm 1/4W
R830	06S64995F77	10K ohm
R831	06S53330F61	2.2K ohm 1/8W
R832	06S53330F77	10K ohm 1/8W
R833	06S64995F77	10K ohm
R834	06S53330F61	2.2K ohm 1/8W
R835	06S64996F02	100K ohm
R836	06S64996F02	100K ohm
R837	06S53330F69	4.7K ohm 1/8W
R838	06S64995F77	10K ohm
R839	06S53330F65	3.3K ohm 1/8W
R840	06S64995F53	1K ohm
R841	06T70072F37	220 ohm 1/4W
R843	06S64995F81	15K ohm
R844	06S64995F86	24K ohm
R845	06S64995F67	3.9K ohm
R846	06S53330F85	22K ohm 1/8W
R847	06T70072F16	30 ohm 1/4W
R852	06S64995F77	10K ohm
R853	06S64995F53	1K ohm
R854	06S64995F53	1K ohm
R855	06T70072F16	30 ohm 1/4W
VR001	18T45040F11	Variable, 4.7K ohm
VR401	18T83611F02	Volume, Rotary Encoder (AUDIO MODE SELECT/ LOUD/VOLUME UP DOWN /CONTRAST CONTROL)
Front P. C. Board		
IC's		
IC401	51T93954F01	BX1393
IC402	51T16615W16	16615W16
IC403	51T35265W01	μPD7229AGF
IC404	51T83905F01	LC7582A
Transistors		
Q401	48T63788F01	CP., 2SD1328
Q402	48T63788F01	CP., 2SD1328
Q403	48T63788F01	CP., 2SD1328
Q404	48T63788F01	CP., 2SD1328
Q405	48T63788F01	CP., 2SD1328
Q406	48T63788F01	CP., 2SD1328
Q407	48T63420F01	CP., 2SA1037K

Symbol No.	Part No.	Description
Diodes		
D402	48T94471F01	CP., IMN10
D403	48T94471F01	CP., IMN10
D404	48T94471F01	CP., IMN10
LED's		
LD401	48T15700W01	MAA4868K (ORG)
LD402	48T15700W01	MAA4868K (ORG)
LD403	48T94877F02	AABG4207K (ORG/GRN)
LD404	48T94877F02	AABG4207K (ORG/GRN)
LD405	48T94877F02	AABG4207K (ORG/GRN)
LD406	48T94877F02	AABG4207K (ORG/GRN)
LD408	48T94877F02	AABG4207K (ORG/GRN)
LD409	48T15700W01	MAA4868K (ORG)
Switches		
S402	40T10876W12	Tact, SKHLAJ (MONO/REPEAT)
S403	40T10876W12	Tact, SKHLAJ (SCAN)
S404	40T10876W12	Tact, SKHLAJ (DN/REW)
S405	40T10876W12	Tact, SKHLAJ (A.P.I)
S406	40T10876W12	Tact, SKHLAJ (4/B.SKIP)
S407	40T10876W12	Tact, SKHLAJ (1/DOLBY B)
S408	40T10876W12	Tact, SKHLAJ (UP/FF)
S409	40T10876W12	Tact, SKHLAJ (T.INFO/DX)
S410	40T10876W12	Tact, SKHLAJ (5/R.EJECT)
S411	40T10876W12	Tact, SKHLAJ (2/DOLBY C)
S412	40T10876W12	Tact, SKHLAJ (TONER/BAND)
S413	40T10876W12	Tact, SKHLAJ (⏏)
S414	40T10876W12	Tact, SKHLAJ (6/P.S. DN)
S415	40T10876W12	Tact, SKHLAJ (3/P.S. UP)
S416	40T10876W12	Tact, SKHLAJ(TAPE ▶ / ||)
S417	40T10876W12	Tact, SKHLAJ (POWER)
S418	40T10876W12	Tact, SKHLAJ (D.A.P/M.I.X. PROG)
S419	40T10876W12	Tact, SKHLAJ (D.DISP)
S420	40T10876W12	Tact, SKHLAJ (DISC ▶ / ||)
S421	40T10876W12	Tact, SKHLAJ (TUNE)
S422	40T10876W12	Tact, SKHLAJ (RESET)
Crystal / Thermistor		
X401	91T67096F01	Crystal, 4.5MHz
TH401	48T93439F03	10K ohm

Symbol No.	Part No.	Description
Lamps		
PL401	65T25170W06	6V-70mA
PL402	65T25170W06	6V-70mA
PL403	65T25170W13	6V-70mA
PL404	65T25170W13	6V-70mA
PL405	65T25230W02	6.7V-85mA
PL406	65T25230W03	6.7V-85mA
PL407	65T25170W06	6V-70mA
PL408	65T25170W06	6V-70mA
PL409	65T25170W06	6V-70mA
PL410	65T25170W13	6V-70mA
PL411	65T25170W13	6V-70mA
Capacitors		
C401	08T15399W01	CP., 0.022μF
C402	08T15399W03	CP., 0.047μF
E402	23S61523F07	ELY., 47μF / 6.3V
C403	08S65128F69	CP., 0.01μF
E403	23S61523F07	ELY., 47μF / 6.3V
C404	08S65128F69	CP., 0.01μF
E404	23S61523F07	ELY., 47μF / 6.3V
C405	08S65128F69	CP., 0.01μF
C406	08S65128F69	CP., 0.01μF
C407	08T15399W01	CP., 0.022μF
C408	08S65128F55	CP., 680pF
C409	08S65128F19	CP., 22pF
C410	08S65128F19	CP., 22pF
Resistors (All resistors are chip 1/10W ± 5% unless otherwise noted.)		
R404	06T70072F15	27 ohm 1/4W
R405	06T70072F47	560 ohm 1/4W
R408	06T70072F15	27 ohm 1/4W
R409	06T70072F23	56 ohm 1/4W
R410	06T70072F23	56 ohm 1/4W
R411	06T70072F47	560 ohm 1/4W
R412	06T70072F15	27 ohm 1/4W
R413	06S64995F93	47K ohm
R414	06S64995F93	47K ohm
R415	06S64995F93	47K ohm
R416	06S64995F93	47K ohm
R417	06S64995F93	47K ohm

Symbol No.	Part No.	Description
R419	06S64995F93	47K ohm
R420	06S64995F93	47K ohm
R421	06S64995F61	2.2K ohm
R423	06S64995F77	10K ohm
R424	06S64995F77	10K ohm
R425	06S64995F77	10K ohm
R426	06S64995F77	10K ohm
R427	06S64995F77	10K ohm
R428	06S64995F93	47K ohm
R431	06S64995F93	47K ohm
R432	06S64995F65	3.3K ohm
R433	06S64995F65	3.3K ohm
R434	06S64995F65	3.3K ohm
R435	06S64995F65	3.3K ohm
R436	06S64995F65	3.3K ohm
R437	06S64995F65	3.3K ohm
R438	06T70072F15	27 ohm 1/4W
R439	06S64995F93	47K ohm
R440	06S64995F93	47K ohm
R441	06S64995F93	47K ohm
R442	06S64995F93	47K ohm
R443	06S64995F77	10K ohm
R444	06S64995F61	2.2K ohm
R445	06T70072F47	560 ohm 1/4W
R446	06T70072F47	560 ohm 1/4W
R447	06T70072F47	560 ohm 1/4W
R448	06T70072F47	560 ohm 1/4W
R449	06T70072F47	560 ohm 1/4W
R450	06T70072F47	560 ohm 1/4W
R451	06T70072F47	560 ohm 1/4W
R452	06T70072F47	560 ohm 1/4W
R453	06T70072F47	560 ohm 1/4W
R455	06T70072F47	560 ohm 1/4W
R456	06S64995F93	47K ohm

MPX & Dolby P. C. Board

IC's		
IC003	51T94316F02	AN7465S
IC004	51T93333F01	NJM2904M
IC301	51T25767W02	CXA1332M
IC511	51T40242T02	MC14011BFL1

Symbol No.	Part No.	Description
Transistors		
Q001	48T62967F03	CP., DTC124K
Q002	48T62967F03	CP., DTC124K
Q003	48T62966F22	CP., DTA144TK
Q004	48T62967F03	CP., DTC124K
Q303	48T62967F03	CP., DTC124K
Q304	48T62967F03	CP., DTC124K
Q305	48T62967F03	CP., DTC124K
Q306	48T62967F03	CP., DTC124K
Q701	48T52438F03	CP., 2SD601A
Q702	48T63420F03	CP., 2SA1037K
Diode		
D003	48T68828F01	1SS133
Coils / Buzzer		
L001	24T42241U04	Dolby, 23mH
L002	24T42241U04	Dolby, 23mH
L701	24T51656F46	Inductor, 1mH
BZ501	50T25148W01	Buzzer, CB13PA
Capacitors		
E007	23T25149W10	ELY., 22µF / 16V
E008	23S61523F25	ELY., 0.1µF / 50V
E009	23S61523F25	ELY., 0.1µF / 50V
E010	23S61523F26	ELY., 0.22µF / 50V
E011	23S61523F29	ELY., 1µF / 50V
C012	08S65128F69	CP., 0.01µF
E012	23S61523F25	ELY., 0.1µF / 50V
C013	08S65128F67	CP., 6800pF
E013	23T25149W15	ELY., 4.7µF / 35V
C014	08T35388W30	PP., 390pF
E014	23S61523F29	ELY., 1µF / 50V
C015	08T15399W03	CP., 0.047µF
E015	23S61523F29	ELY., 1µF / 50V
C016	08T15399W03	CP., 0.047µF
E016	23S61523F12	ELY., 10µF / 16V
C017	08S65128F63	CP., 3300pF

Symbol No.	Part No.	Description
C018	08S65128F69	CP., 0.01µF
C019	08S65128F51	CP., 470pF
C020	08S65128F69	CP., 0.01µF
C021	08S65128F78	CP., 0.022µF
C022	08S65128F78	CP., 0.022µF
C023	08S65128F61	CP., 2200pF
C024	08S65128F61	CP., 2200pF
C025	08S65128F63	CP., 3300pF
C026	08S65128F63	CP., 3300pF
C027	08S65128F61	CP., 2200pF
C028	08S65128F61	CP., 2200pF
C031	08S65128F78	CP., 0.022µF
C301	08T90316F38	TF, 0.56µF
E301	23T45078W12	ELY., 47µF / 16V
C302	08T90316F38	TF, 0.56µF
E302	23T25149W09	ELY., 10µF / 16V
C303	08T35388W09	PP., 2200pF
E303	23T25149W03	ELY., 0.33µF / 50V
C304	08T35388W09	PP., 2200pF
E304	23T25149W03	ELY., 0.33µF / 50V
C305	08T35388W09	PP., 2200pF
E305	23S61523F12	ELY., 10µF / 16V
C306	08T35388W09	PP., 2200pF
E306	23S61523F12	ELY., 10µF / 16V
E307	23T25149W05	ELY., 1µF / 50V
E308	23T25149W05	ELY., 1µF / 50V
E309	23T25149W05	ELY., 1µF / 50V
E310	23T25149W05	ELY., 1µF / 50V
E511	23S61523F12	ELY., 10µF / 16V
C528	08S65128F62	CP., 2700pF
C529	08S65128F78	CP., 0.022µF
C701	08S65128F69	CP., 0.01µF
C702	08S65128F61	CP., 2200pF
C703	08S65128F69	CP., 0.01µF
C704	08S65128F69	CP., 0.01µF
Resistors (All resistors are chip 1/10W ± 5% unless otherwise noted.)		
R013	06S53330F05	10 ohm 1/8W
R014	06S64996F18	470K ohm
R015	06S64995F79	12K ohm
R016	06S64995F65	3.3K ohm
R017	06S64995F57	1.5K ohm
R018	06S64996F26	1M ohm
R019	06S64995F69	4.7K ohm
R020	06S64995F65	3.3K ohm
R021	06S64995F81	15K ohm
R022	06S64995F81	15K ohm

Symbol No.	Part No.	Description
R023	06S64995F77	10K ohm
R024	06S64995F65	3.3K ohm
R025	06S64995F65	3.3K ohm
R026	06S64995F65	3.3K ohm
R027	06S64995F65	3.3K ohm
R028	06S64995F69	4.7K ohm
R029	06S64995F69	4.7K ohm
R030	06S64995F65	3.3K ohm
R031	06S64995F65	3.3K ohm
R032	06S64996F02	100K ohm
R033	06S64995F93	47K ohm
R034	06S64995F95	56K ohm
R037	06S64995F75	8.2K ohm
R038	06S64996F02	100K ohm
R039	06S64996F02	100K ohm
R040	06S64995F85	22K ohm
R041	06S64996F20	560K ohm
R042	06S53330F41	330 ohm 1/8W
R043	06S64996F14	330K ohm
R044	06S64996F02	100K ohm
R045	06S64995F77	10K ohm
R046	06S64995F81	15K ohm
R048	06S64996F26	1M ohm
R301	06S64995F87	27K ohm
R302	06S64995F53	1K ohm
R303	06S64995F47	560 ohm
R304	06S64995F47	560 ohm
R305	06S64995F86	24K ohm
R306	06S64995F86	24K ohm
R307	06S64995F37	220 ohm
R308	06S64995F37	220 ohm
R309	06S64995F79	12K ohm
R310	06S64995F75	8.2K ohm
R311	06S64995F79	12K ohm
R312	06S64995F75	8.2K ohm
R558	06S64995F37	220 ohm
R559	06S64995F37	220 ohm
R560	06S64995F90	36K ohm
R561	06S64996F26	1M ohm
R562	06S64995F93	47K ohm
R701	06S64995F77	10K ohm
R702	06S64995F21	47 ohm
R703	06S64996F02	100K ohm
R704	06S64996F02	100K ohm
R708	06S64996F04	120K ohm
VR002	18T35121W11	Variable, 4.7K ohm
VR003	18T16359W09	Variable, 2.2K ohm
VR004	18T16359W14	Variable, 15K ohm
VR301	18T35121W13	Variable, 10K ohm
VR302	18T35121W13	Variable, 10K ohm

Symbol No.	Part No.	Description
GR Contorl P. C. Board		
IC's / Transistors		
IC1501	51T25621W01	IC, AN6275K
IC1502	51T67915F01	IC, M51143AL
Q1501	48T84366F05	2SB1243
Q1502	48T94606F12	CP., DTC144TU
Capacitors		
E1501	23S61524F32	ELY., 1μF / 50V
C1502	08T35374W01	CP., 0.1μF
C1503	08T35374W01	CP., 0.1μF
C1504	08T35374W01	CP., 0.1μF
C1505	08S65128F15	CP., 15pF
Resistors (All resistors are chip 1/10W ± 5% unless otherwise noted.)		
R1501	06S64995F77	10K ohm
R1502	06S64995F77	10K ohm
R1503	06S64996F10	220K ohm
R1504	06S64996F26	1M ohm
R1505	06S64996F18	470K ohm
R1506	06S64996F01	91K ohm
GR Audio P. C. Board		
IC / Diode		
IC1201	51T15146W01	IC, TA7705P
D1201	48T44813F01	MA165TA
Capacitors		
E1201	23T25149W09	ELY., 10μF / 16V
C1202	08T35389W07	TF, 330pF
E1202	23T25149W13	ELY., 100μF / 10V
C1203	08T35389W07	TF, 330pF
E1203	23T25149W13	ELY., 100μF / 10V
C1204	08T35389W07	TF, 330pF
E1204	23T25149W12	ELY., 47μF / 16V

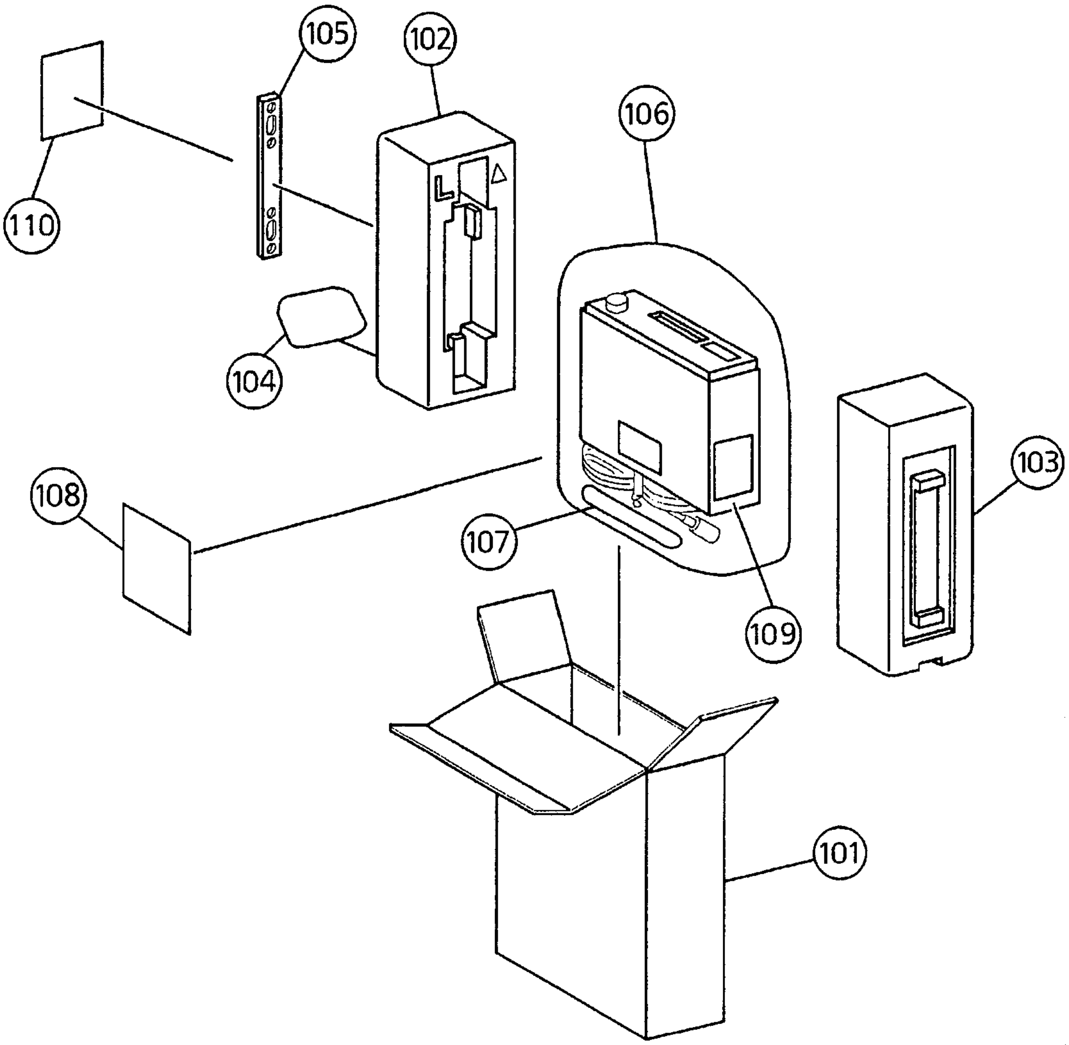
Symbol No.	Part No.	Description
C1205	08T35389W07	TF, 330pF
E1205	23T25149W15	ELY., 4.7μF / 35V
E1206	23T25149W15	ELY., 4.7μF / 35V
C1208	08T35122W02	TF, 0.012μF
C1209	08T35122W02	TF, 0.012μF
Resistors (All resistors are chip 1/10W ± 5% unless otherwise noted.)		
R1201	06S53330F29	100 ohm 1/8W
R1202	06S53330F32	130 ohm 1/8W
R1203	06S53330F32	130 ohm 1/8W
R1204	06S64996F14	330K ohm
R1205	06S64996F14	330K ohm
R1208	06S64995F78	11K ohm
R1209	06S64995F78	11K ohm
R1210	06S64995F81	15K ohm
R1211	06S64995F81	15K ohm
R1212	06S64995F65	3.3K ohm
R1213	06S53330F65	3.3K ohm 1/8W
R1214	06S53330F85	22K ohm 1/8W
R1215	06S64995F85	22K ohm
Miscellaneous		
BA501	60T25650W02	Battery, Lit. CR2032-1VC1
or	60T91060F03	Battery, Lit. CR2032-1VO3
D808	48T81044F01	Diode, 10E2
ET801	01T25803W11	QRB Socket
HD1101	88T35406W01	Head
LCD401	65T35501W01	LCD Display FTD-10441H
M1501	01V41100W72	Assy., Main Motor (11.5V-85mA)
PT1501	51T15144W01	Sensor, Photo
S1501	40T15222W01	Switch, Detector (PACK IN)
S1502	40T15382W01	Switch, Detector (PACK DOWN)
S1503	40T15382W01	Switch, Detector (METAL)
SD1501	01T10369W02	Assy., Eject Solenoid
SD1502	01T15249W01	Assy., Play Solenoid
SD1503	01T10371W01	Assy., RF Solenoid

Symbol No.	Part No.	Description

Packing Assembly Parts List

Symbol No.	Part No.	Description
101	56S22119W86	Carton, Packing (Individual)
102	56D30982W01	Tray, Packing (L)
103	56D30982W02	Tray, Packing (R)
104	01V34100W03	Assy., Kit
105	07B64552F01	Bracket, Strap Receiver
106	56C40990T36	Sack, Polyethylene
107	01T96095F08	Assy., Cannector (4P)
108-1	68P22493W67	Owner's Manual
108-2	68P32052W51	Owner's Manual
108-3	68P32052W80	Owner's Manual
109-1	15D21598W01	Case, Mother
109-2	03A28015W01	Screw, Special (M2.6 x 6.7)
109-3	01T35620W17	Assy., QRB Connector
110-1	01T35404W02	Assy., Remocon
110-2	60T70585F01	Battery, Lit. 3V

Packing Method View



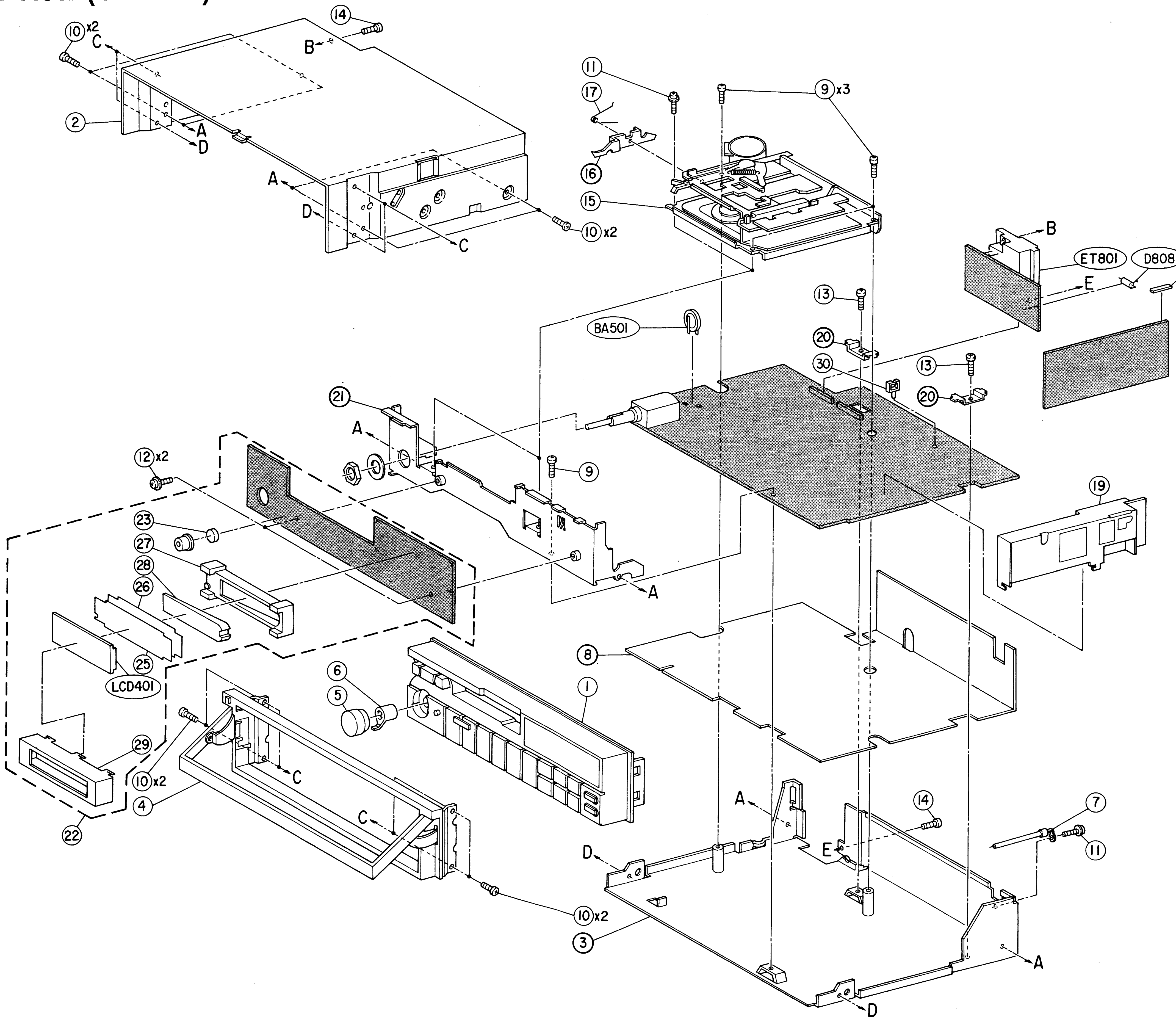
Cabinet Assembly Parts List

Notes : ● The parts without parts list are not supplied.
● Parts marked * will need a long delivery time, or may be not supplied in some cases.

Symbol No.	Index	Part No.	Description
1	4-D	13D30980W04	Assy., Nosepice
2	1-B	15C21584W04	Cover, Top
4	4-B	07C21606W01	Assy., Bracket Handle
5	4-C	36A31085W01	Knob, Rotary
6	4-C	36A31501W01	Knob, Control
7	4-G	01T16472W03	Assy., Lug Wire GND
9	1-E	03S44205G07	Screw, Pan (M2.6×5)
10		03S44205G34	Screw, Pan (M2.6×5)
11		03S71677F06	Screw, Flange (M2.6×6)
12	3-B	03C42723U08	Screw, Cup (M2.6×5.5)
13		03S44205G42	Screw, Pan (M2.6×4)
14	4-F	03S52360F78	Screw, Pan (M2.6×8)
*15	2-D	81D30455W03	Cassette Deck GR75H030
17	1-D	41A20424W01	Spring, Door
19	3-G	77C30794W01	FM / MW / LW Tuner Unit MB4R901B (FE001)
*22	5-B	01V33900W24	Assy., Front P.C.Board
23	3-B	43A13836W01	Spacer, Power
25	4-B	26A31424W03	Sheet, LCD
26	3-B	26A31424W02	Sheet, LCD
27	3-B	15A31421W01	Case, LCD
28	3-B	61A31423W01	Lens, LCD
29	4-B	15A31422W01	Cover, LCD
30	2-E	42T93247F05	Clamp
32	2-G	75S62361F11	Pad, Cushion

Symbol No.	Index	Part No.	Description

Exploded View (Cabinet)


14
10 x2
C
B
2
A
D
A
D
C
10 x2
11
17
9 x3
16
15
B
ET801
D808
32
E
13
20
BA501
30
13
20
21
A
9
12 x2
23
27
28
26
25
LCD401
A
19
8
6
5
1
29
10 x2
4
C
C
22
A
14
7
E
11
D
10 x2
3
A
D
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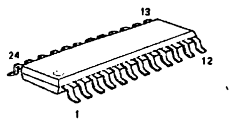
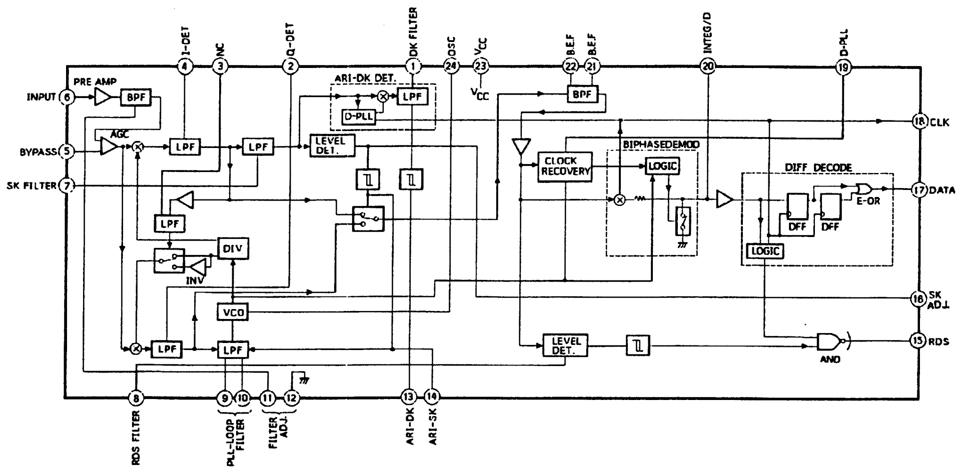
3
4
5
A
B
C
D
E
F
G
H

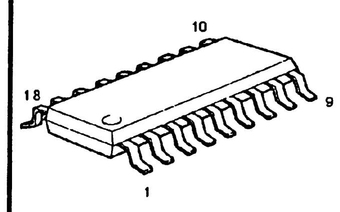
Semi-Conductor Lead Identifications

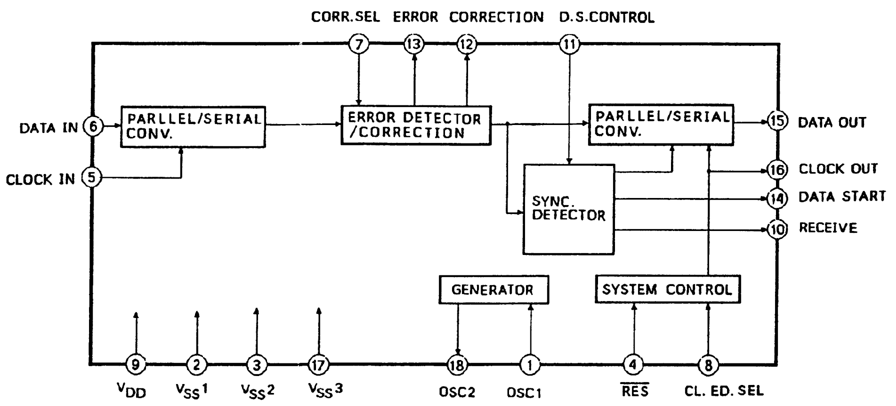
LA2230 : IC001



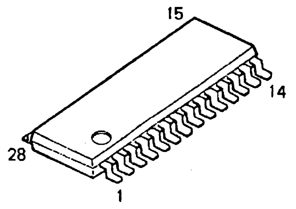

I-DET
NC
Q-DET
DK FILTER
OSC
VCC
B.E.F
B.E.F
INTEG/D
D-PLL
4
3
2
1
24
23
22
21
20
19
PRE AMP
INPUT 6
BPF
ARI-DK DET.
LPF
D-PLL
VCC
BPF
18 CLK
AGC
BYPASS 5
LPF
LPF
LEVEL DET.
CLOCK RECOVERY
BIPHASEDEMOD
LOGIC
DIFF DECODE
SK FILTER 7
17 DATA
E-OR
DFF
DFF
LPF
LOGIC
DIV
INV
16 SK ADJ.
VCO
LPF
LPF
LEVEL DET.
15 RDS
AND
8
9
10
11
12
13
14
RDS FILTER
PLL-LOOP FILTER
FILTER ADJ.
ARI-DK
ARI-SK

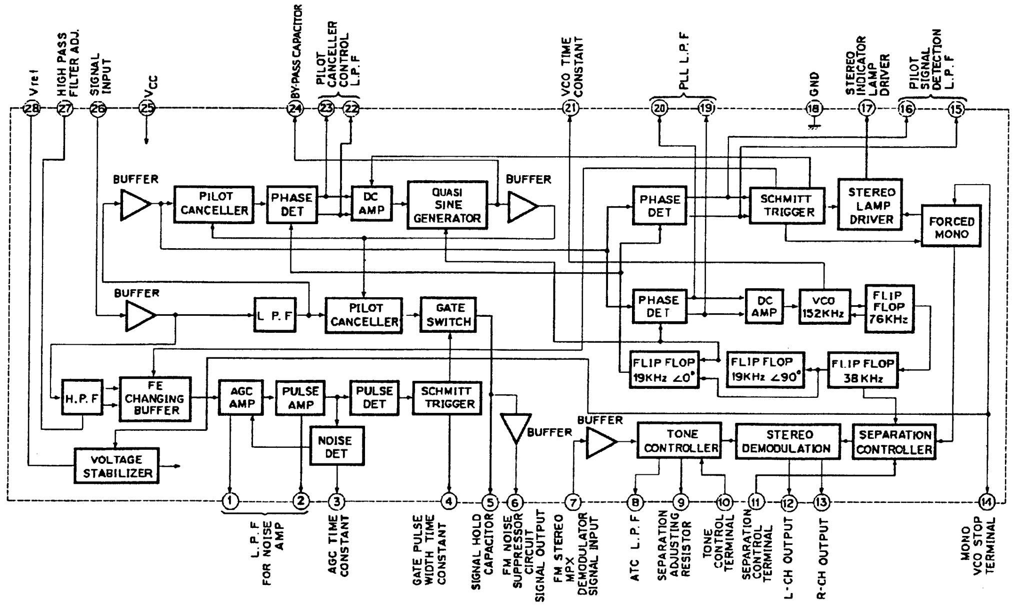
LA7073M : IC002



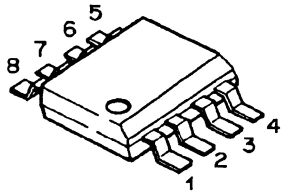

CORR.SEL ERROR CORRECTION D.S.CONTROL
7
13
12
11
DATA IN 6
PARLLEL/SERIAL CONV.
ERROR DETECTOR /CORRECTION
PARLLEL/SERIAL CONV.
15 DATA OUT
CLOCK IN 5
16 CLOCK OUT
SYNC. DETECTOR
14 DATA START
10 RECEIVE
GENERATOR
SYSTEM CONTROL
9
2
3
17
18
1
4
8
VDD
VSS1
VSS2
VSS3
OSC2
OSC1
RES
CL. ED. SEL

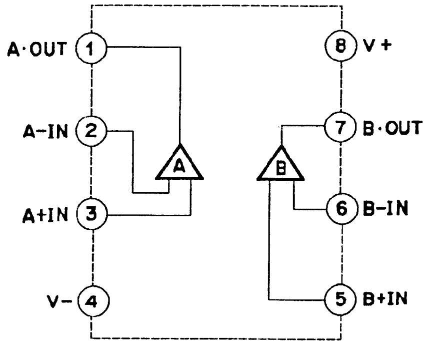
AN7465S : IC003




Vref
HIGH PASS FILTER ADJ.
SIGNAL INPUT
VCC
BY-PASS CAPACITOR
PILOT CANCELLER CONTROL L.P.F
VCO TIME CONSTANT
PLL L.P.F
GND
STEREO INDICATOR LAMP DRIVER
PILOT SIGNAL DETECTION L.P.F
28
27
26
25
24
23
22
21
20
19
18
17
16
15
BUFFER
PILOT CANCELLER
PHASE DET
DC AMP
QUASI SINE GENERATOR
BUFFER
PHASE DET
SCHMITT TRIGGER
STEREO LAMP DRIVER
FORCED MONO
BUFFER
L P.F
PILOT CANCELLER
GATE SWITCH
PHASE DET
DC AMP
VCO 152KHz
FLIP FLOP 76KHz
FLIP FLOP 19KHz ∠0°
FLIP FLOP 19KHz ∠90°
FLIP FLOP 38KHz
H.P.F
FE CHANGING BUFFER
AGC AMP
PULSE AMP
PULSE DET
SCHMITT TRIGGER
NOISE DET
BUFFER
BUFFER
TONE CONTROLLER
STEREO DEMODULATION
SEPARATION CONTROLLER
VOLTAGE STABILIZER
1
2
3
4
5
6
7
8
9
10
11
12
13
14
L.P.F FOR NOISE AMP
AGC TIME CONSTANT
GATE PULSE WIDTH TIME CONSTANT
SIGNAL HOLD CAPACITOR
FM NOISE SUPPRESSOR CIRCUIT SIGNAL OUTPUT
FM STEREO MPX DEMODULATOR SIGNAL INPUT
ATC L.P.F
SEPARATION ADJUSTING RESISTOR
TONE CONTROL TERMINAL
SEPARATION CONTROL TERMINAL
L-CH OUTPUT
R-CH OUTPUT
MONO VCO STOP TERMINAL

NJM2904M : IC004, 801
NJM5532M : IC205, 207, 208

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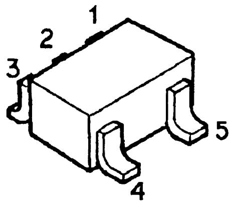
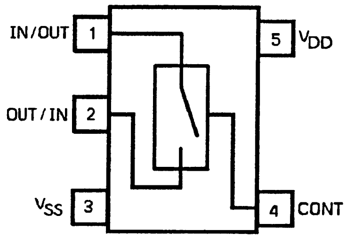
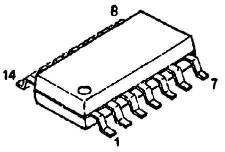
A-IN 2
A+IN 3
V- 4
8 V+
7 B·OUT
6 B-IN
5 B+IN
A
B

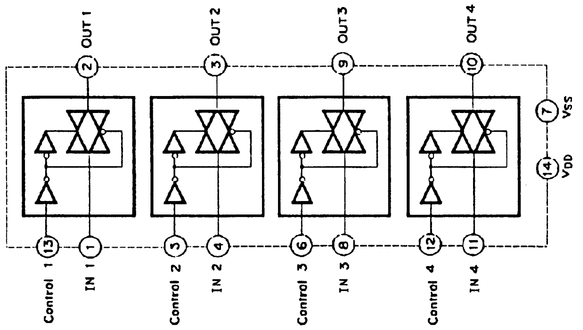
TC4S66F : IC005



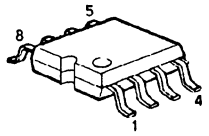

IN/OUT 1
OUT/IN 2
VSS 3
5 VDD
4 CONT

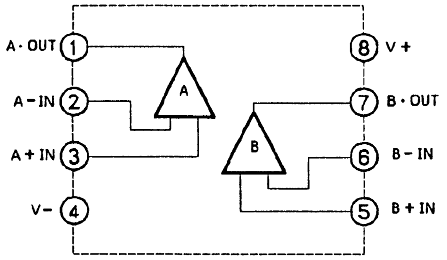
MC14066BFL1 : IC201



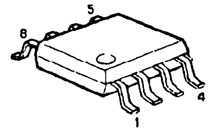

OUT 1
OUT 2
OUT 3
OUT 4
2
3
9
10
7 VSS
14 VDD
13
1
5
4
6
8
12
11
Control 1
IN 1
Control 2
IN 2
Control 3
IN 3
Control 4
IN 4

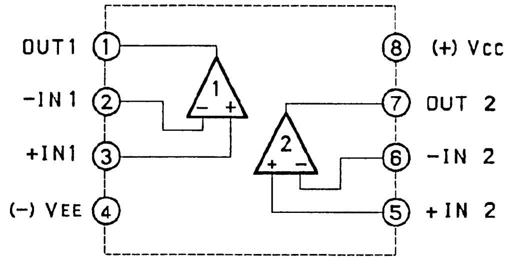
BA15532F : IC202, 206



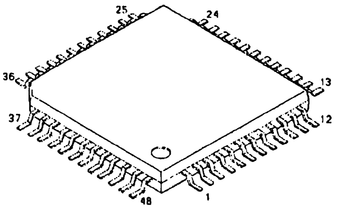

A·OUT 1
A−IN 2
A+IN 3
V− 4
8 V+
7 B·OUT
6 B−IN
5 B+IN
A
B

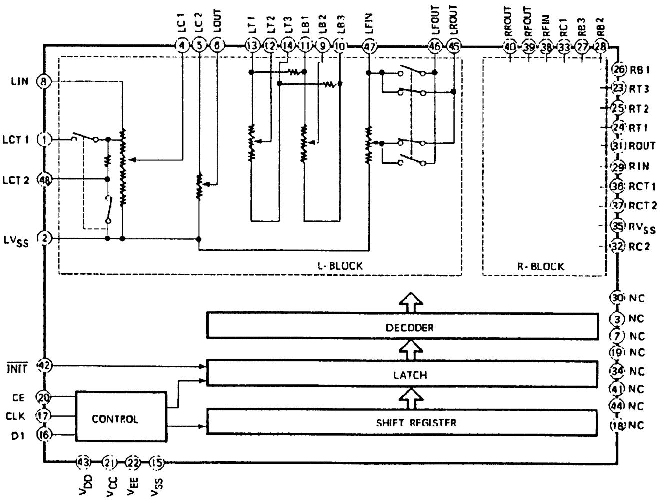
M5238FP : IC203, 204
MJM4560M : IC210
MJM2903M : IC503



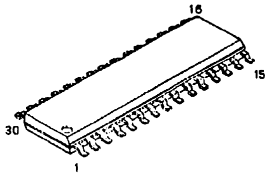

OUT1 1
−IN1 2
+IN1 3
(−) VEE 4
8 (+) Vcc
7 OUT 2
6 −IN 2
5 +IN 2
1
−
+
2
+
−

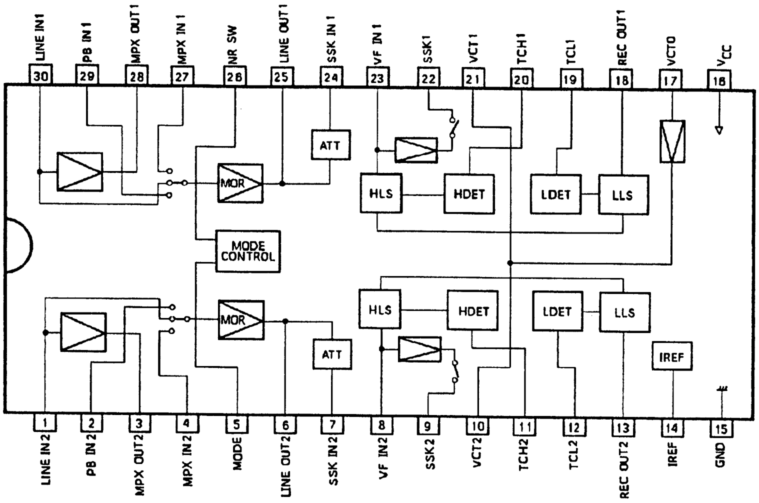
LC7537AN : IC209


25
24
36
13
37
12
48
1

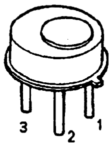

LC1
LC2
LOUT
LT1
LT2
LT3
LB1
LB2
LB3
LFIN
LFOUT
LROUT
RROUT
RFOUT
RFIN
RC1
RB3
RB2
4
5
6
13
12
14
11
9
10
47
46
45
40
39
38
33
27
28
LIN 8
LCT1 1
LCT2 48
LVSS 2
26 RB1
23 RT3
25 RT2
24 RT1
31 ROUT
29 RIN
36 RCT1
37 RCT2
35 RVSS
32 RC2
L-BLOCK
R-BLOCK
30 NC
3 NC
7 NC
19 NC
34 NC
41 NC
44 NC
18 NC
DECODER
LATCH
SHIFT REGISTER
CONTROL
INIT 42
CE 20
CLK 17
D1 16
43
21
22
15
VDD
VCC
VEE
VSS

CXA1332M : IC301

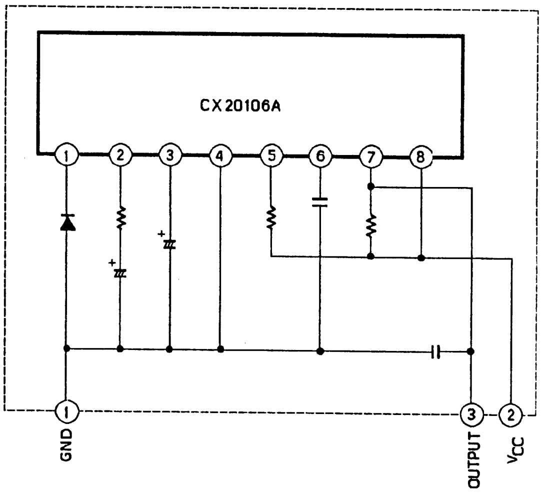



LINE IN1
PB IN1
MPX OUT1
MPX IN1
NR SW
LINE OUT1
SSK IN1
VF IN1
SSK1
VCT1
TCH1
TCL1
REC OUT1
VCT0
V_{CC}
30
29
28
27
26
25
24
23
22
21
20
19
18
17
16
ATT
MOR
HLS
HDET
LDET
LLS
MODE CONTROL
MOR
HLS
HDET
LDET
LLS
ATT
IREF
1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
LINE IN2
PB IN2
MPX OUT2
MPX IN2
MODE
LINE OUT2
SSK IN2
VF IN2
SSK2
VCT2
TCH2
TCL2
REC OUT2
IREF
GND

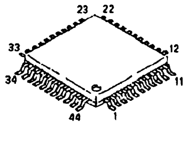
BX1393 : IC401



1. GND
2. V_{CC}
3. OUTPUT

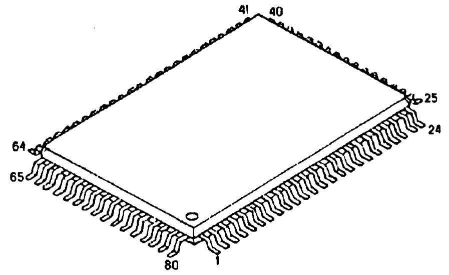

CX20106A
1
2
3
4
5
6
7
8
+
+
1
GND
3
OUTPUT
2
V_{CC}

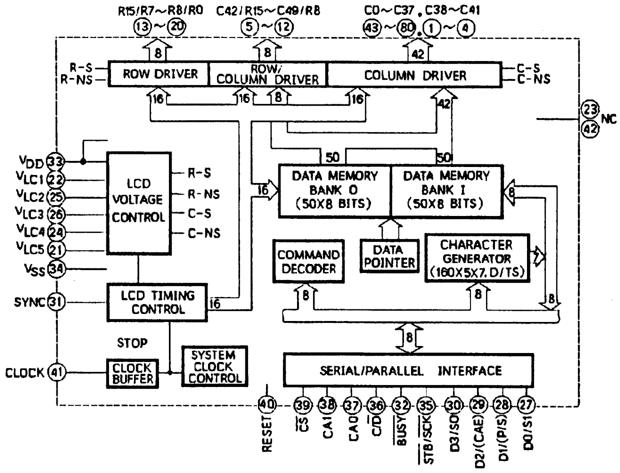
16615W16 : IC402


23
22
33
12
34
11
44
1

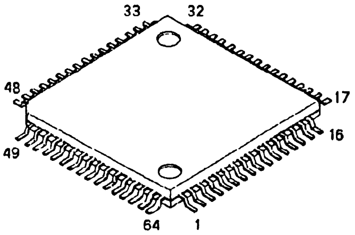
PIN NO.	CORD ADDRESS	I/O	PIN NO.	CORD ADDRESS	I/O
1	KEY R1	I	23	NC	—
2	KEY R2	I	24	NC	—
3	KEY R3	I	25	DATA	O
4	KEY S0	O	26	$\overline{\text{CS}}$	O
5	KEY S1	O	27	GND	—
6	KEY S2	O	28	GND	—
7	KEY S3	O	29	DISP DATA	I
8	KEY S4	O	30	KEY DATA	O
9	POWER ON	O	31	$\overline{\text{DISP CLK}}$	I
10	NC	—	32	GND	—
11	NC	—	33	$\overline{\text{BUSY}}$	I
12	GND	—	34	NC	—
13	DATA	O	35	CE	I
14	CLK	O	36	DISP REQ	I
15	CE	O	37	REMOCON	I
16	$\overline{\text{INH}}$	O	38	V_{DD}	—
17	V_{SS}	—	39	V_{DD}	—
18	XT1	—	40	C/D	O
19	XT2	—	41	CLK	O
20	$\overline{\text{RESET}}$	I	42	RESET	O
21	X1	—	43	$\overline{\text{SCK}}$	—
22	X2	—	44	KEY R0	I

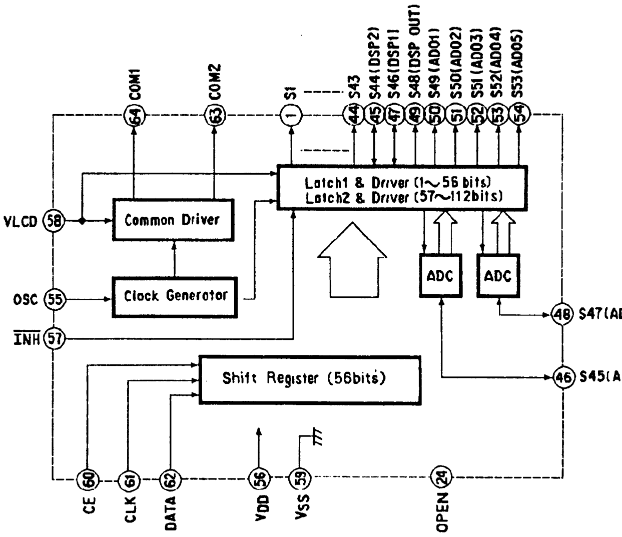
µPD7229AGF : IC403


41
40
25
24
64
65
80
1

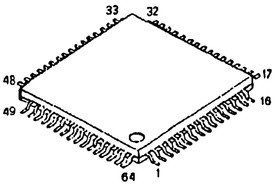

R15/R7~R8/R0
⑬~⑳
C42/R15~C49/R8
⑤~⑫
C0~C37, C38~C41
㊸~(80), ①~④
8
8
42
R-S
R-NS
ROW DRIVER
ROW/COLUMN DRIVER
COLUMN DRIVER
C-S
C-NS
16
16
8
16
42
㉓
㊷
NC
VDD ㉝
VLC1 ㉒
VLC2 ㉕
VLC3 ㉖
VLC4 ㉔
VLC5 ㉑
VSS ㉞
LCD VOLTAGE CONTROL
R-S
R-NS
C-S
C-NS
50
50
16
DATA MEMORY BANK 0 (50X8 BITS)
DATA MEMORY BANK 1 (50X8 BITS)
8
COMMAND DECODER
DATA POINTER
CHARACTER GENERATOR (160X5X7. D/TS)
7
SYNC ㉛
LCD TIMING CONTROL
16
8
8
8
STOP
8
CLOCK ㊶
CLOCK BUFFER
SYSTEM CLOCK CONTROL
SERIAL/PARALLEL INTERFACE
㊵ RESET
㊴ CS
㊳ CA1
㊲ CA0
㊱ C/D
㉜ BUSY
㉟ STB/SCK
㉚ D3/S0
㉙ D2/(CAE)
㉘ D1/(P/S)
㉗ D0/S1

LC7582A : IC404


33
32
48
17
49
16
64
1

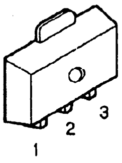

㊿ COM1
㊾ COM2
① S1
S43
S44(DSP2)
S46(DSP1)
S48(DSP OUT)
S49(AD01)
S50(AD02)
S51(AD03)
S52(AD04)
S53(AD05)
㊹ ㊺ ㊼ ㊾ ㊿ (51) (52) (53) (54)
Latch1 & Driver (1~56 bits)
Latch2 & Driver (57~112bits)
VLCD (58)
Common Driver
OSC (55)
Clock Generotor
INH (57)
ADC
ADC
㊽ S47(AD1)
㊻ S45(AD2)
Shift Register (56bits)
(60) CE
(61) CLK
(62) DATA
(56) VDD
(59) VSS
㉔ OPEN

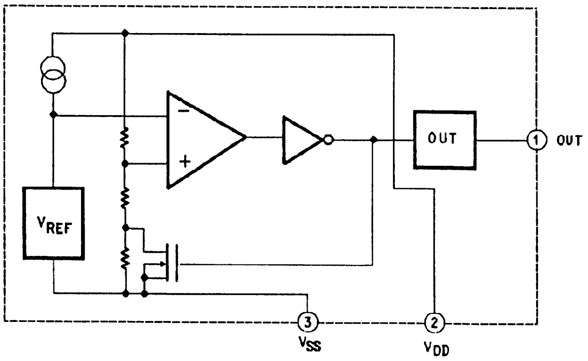
25699W27 : IC501


33
32
48
17
49
16
64
1

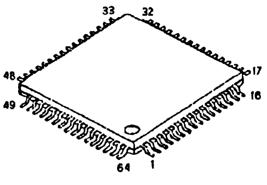
PIN NO.	CORD ADDRESS	I/O	PIN NO.	CORD ADDRESS	I/O	PIN NO.	CORD ADDRESS	I/O
1	RD	O	23	AD 2	I/O	45	$\overline{\text{SK}}$	I
2	FM LEVEL	O	24	V_{SS}	—	46	SER CH	I
3	$\overline{\text{DTS MUTE}}$	O	25	AD 1	I/O	47	MALTI PATH	I
4	$\overline{\text{7071 RESET}}$	O	26	AD 0	I/O	48	$\overline{\text{AD JON}}$	O
5	50K REF	O	27	LE	O	49	S. METER	I
6	RESET	I	28	DTS STB	I	50	$\overline{\text{DK}}$	O
7	X2	O	29	CLOCK	I	51	$\overline{\text{RDS}}$	O
8	X1	I	30	DATA START	I	52	CLOCK	O
9	V_{SS}	—	31	DATA	I	53	PULL DATA OUT	O
10	A15	O	32	PULL DATA IN	I	54	$\overline{\text{LPF SW}}$	O
11	A14	O	33	AUDIO IN	I	55	IF MUTE	O
12	NC	—	34	START	I	56	CE	O
13	NC	—	35	COMMAND	I	57	DYN AS	O
14	NC	—	36	NC	—	58	LW	O
15	AD 10	O	37	NC	—	59	FM/AM	O
16	AD 9	O	38	DTS CLOCK	I	60	L/D	O
17	AD 8	O	39	STATUS	O	61	MONO	O
18	AD 7	I/O	40	EA	I	62	DTS CE	I
19	AD 6	I/O	41	V_{DD}	—	63	SD	I
20	AD 5	I/O	42	GND	—	64	$\overline{\text{WR}}$	O
21	AD 4	I/O	43	AU REF	I			
22	AD 3	I/O	44	$\overline{\text{ST}}$	I			

S-8052HNM : IC504



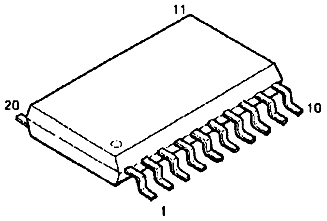

VREF
−
+
OUT
① OUT
③
VSS
②
VDD

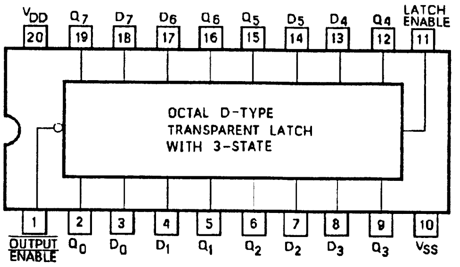
15590W53 : IC505


33
32
17
16
48
49
64
1

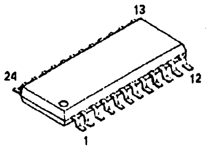
PIN NO.	CORD ADDRESS	I/O	PIN NO.	CORD ADDRESS	I/O	PIN NO.	CORD ADDRESS	I/O
1	RUN DET	I	23	ENCODER A	I	45	EVCE	O
2	PACK DN	I	24	ENCODER B	I	46	EV DATA	O
3	PLAY SOL.	O	25	$\overline{\text{PUSH SW}}$	I	47	EV CLK	O
4	RF SOL.	O	26	V_{SS}	—	48	TP ALARM	O
5	EJECT SOL.	O	27	BATT	I	49	CHG ON	O
6	MOTOR CONT	O	28	ACC	I	50	T/R	O
7	RESE	I	29	CHG IN	I	51	DOL B	O
8	X2	—	30	GND	—	52	DOL C	O
9	X1	—	31	GND	—	53	NC	—
10	LEV	O	32	GND	—	54	NC	—
11	CE DTS	O	33	EXT AUDIO	I	55	OUT INT	O
12	O.MOTOR	O	34	7618/7619	I	56	OUT REM	O
13	F/R	O	35	GND	—	57	V_{DD}	—
14	PACK IN	I	36	$\overline{\text{DTS MUTE}}$	O	58	V_{DD}	—
15	METAL	I	37	CE OUT	O	59	ORG/GRN	O
16	M.S. DET	I	38	DTS STERT	O	60	DTS STBY	O
17	KEY DATA	I	39	QRB ALM	O	61	POWER CONT	O
18	DISP REQ	O	40	TP ALARM	O	62	MUTE	O
19	DISP CLK	O	41	DTS STS	I	63	IN PAUSE	I
20	DISP DATA	O	42	DTS CMD	O	64	IN INT	I
21	CHG D.OUT	O	43	$\overline{\text{DTS SCK}}$	I			
22	KEY REQ	I	44	GND	—			

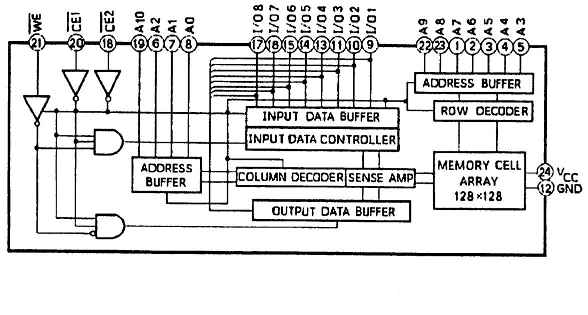
µPD74HC373 : IC506



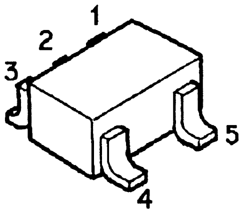

VDD
Q7
D7
D6
Q6
Q5
D5
D4
Q4
LATCH ENABLE
20
19
18
17
16
15
14
13
12
11
OCTAL D-TYPE TRANSPARENT LATCH WITH 3-STATE
1
2
3
4
5
6
7
8
9
10
OUTPUT ENABLE
Q0
D0
D1
Q1
Q2
D2
D3
Q3
VSS

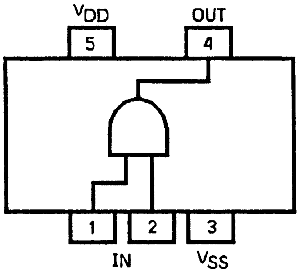
LC3516AML : IC507



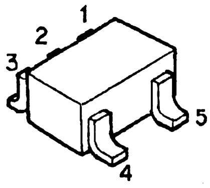

WE
CE1
CE2
A10
A2
A1
A0
I/O8
I/O7
I/O6
I/O5
I/O4
I/O3
I/O2
I/O1
A9
A8
A7
A6
A5
A4
A3
21
20
18
19
6
7
8
17
16
15
14
13
11
10
9
22
23
1
2
3
4
5
ADDRESS BUFFER
ROW DECODER
INPUT DATA BUFFER
INPUT DATA CONTROLLER
ADDRESS BUFFER
COLUMN DECODER
SENSE AMP
MEMORY CELL ARRAY 128×128
OUTPUT DATA BUFFER
24 VCC
12 GND

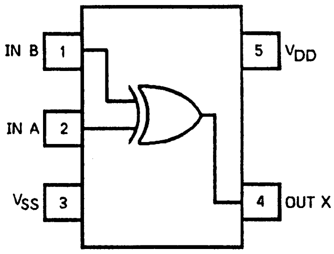
TC4S81F : IC508



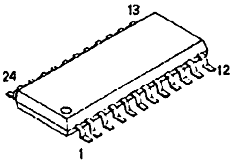

VDD
OUT
5
4
1
2
3
IN
VSS

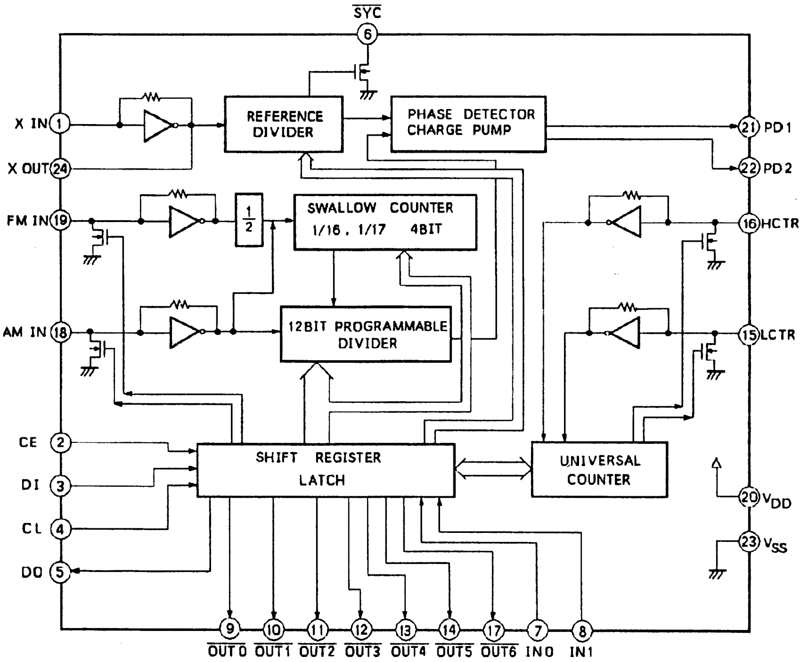
TC4S30F : IC509



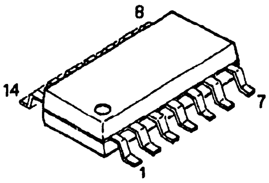

IN B 1
IN A 2
VSS 3
5 VDD
4 OUT X

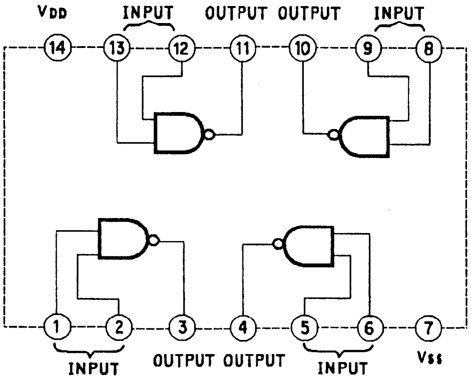
LC7219 : IC510



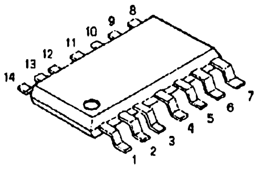

SYC
6
X IN 1
X OUT 24
FM IN 19
AM IN 18
CE 2
DI 3
CL 4
DO 5
REFERENCE DIVIDER
PHASE DETECTOR CHARGE PUMP
1/2
SWALLOW COUNTER 1/16, 1/17 4BIT
12BIT PROGRAMMABLE DIVIDER
SHIFT REGISTER LATCH
UNIVERSAL COUNTER
21 PD1
22 PD2
16 HCTR
15 LCTR
20 VDD
23 VSS
9 OUT0
10 OUT1
11 OUT2
12 OUT3
13 OUT4
14 OUT5
17 OUT6
7 IN0
8 IN1

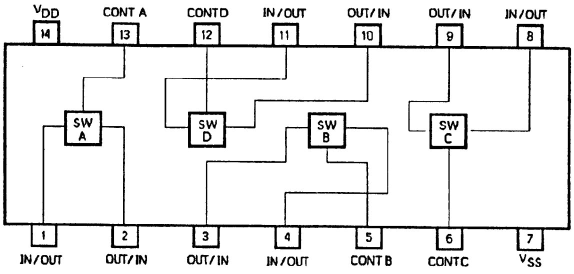
MC14011BFL : IC511



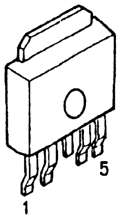

VDD
INPUT
OUTPUT
OUTPUT
INPUT
14
13
12
11
10
9
8
1
2
3
4
5
6
7
INPUT
OUTPUT
OUTPUT
INPUT
VSS

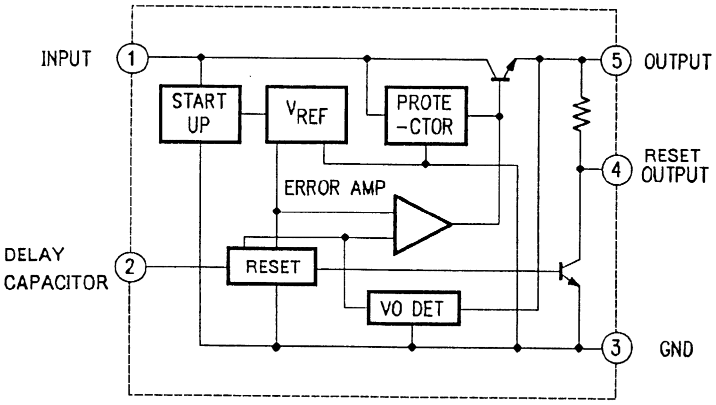
BU4066BF : IC512


1
2
3
4
5
6
7
8
9
10
11
12
13
14

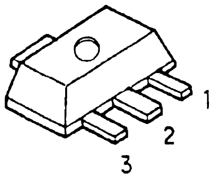

VDD
CONT A
CONTD
IN/OUT
OUT/IN
OUT/IN
IN/OUT
14
13
12
11
10
9
8
SW A
SW D
SW B
SW C
1
2
3
4
5
6
7
IN/OUT
OUT/IN
OUT/IN
IN/OUT
CONT B
CONTC
VSS

L78LR05DFA : IC802

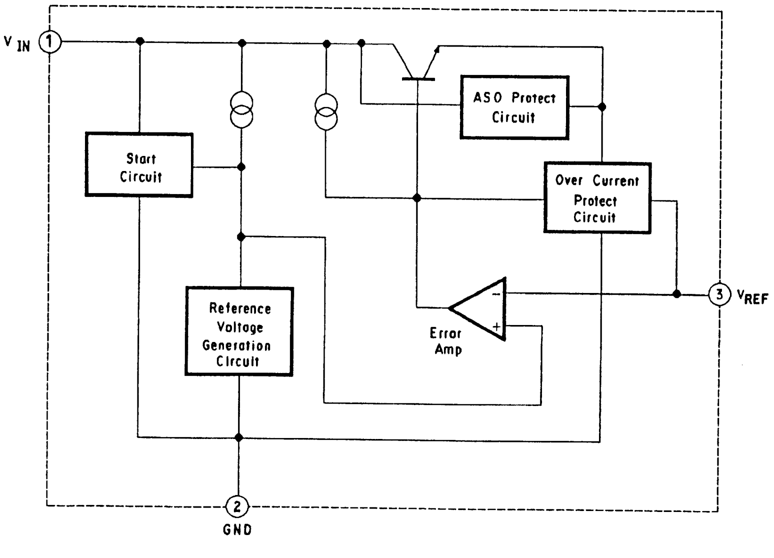



INPUT
1
START UP
VREF
PROTE -CTOR
5
OUTPUT
4
RESET OUTPUT
ERROR AMP
DELAY CAPACITOR
2
RESET
VO DET
3
GND

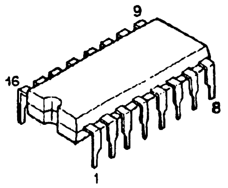
M5236ML : IC803

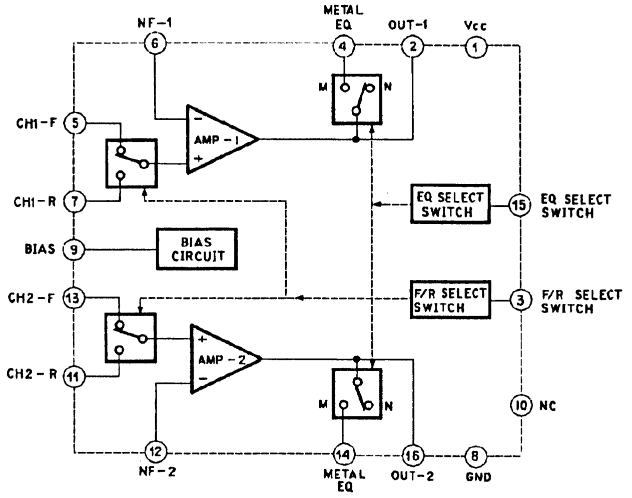


1 VIN
2 GND
3 VREF

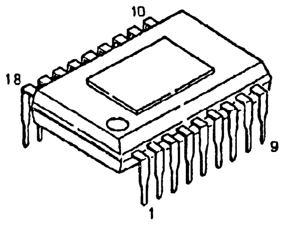

V IN
1
ASO Protect Circuit
Start Circuit
Over Current Protect Circuit
3
VREF
Reference Voltage Generation Circuit
Error Amp
-
+
2
GND

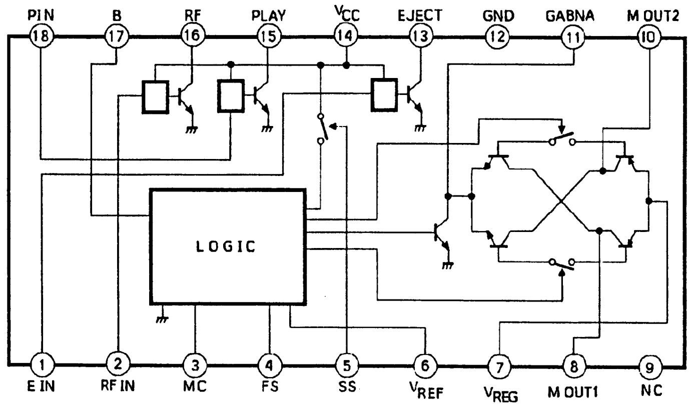
TA7705P : IC1201



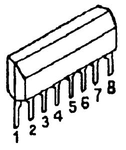

NF-1
METAL EQ
OUT-1
Vcc
6
4
2
1
M
N
AMP-1
CH1-F 5
CH1-R 7
BIAS 9
BIAS CIRCUIT
EQ SELECT SWITCH
15
EQ SELECT SWITCH
CH2-F 13
F/R SELECT SWITCH
3
F/R SELECT SWITCH
AMP-2
CH2-R 11
M
N
10 NC
12
NF-2
14
METAL EQ
16
OUT-2
8
GND

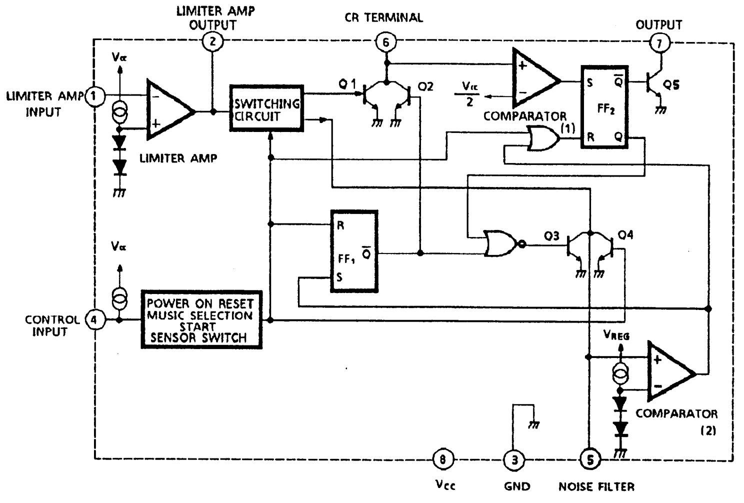
AN6275K : IC1501



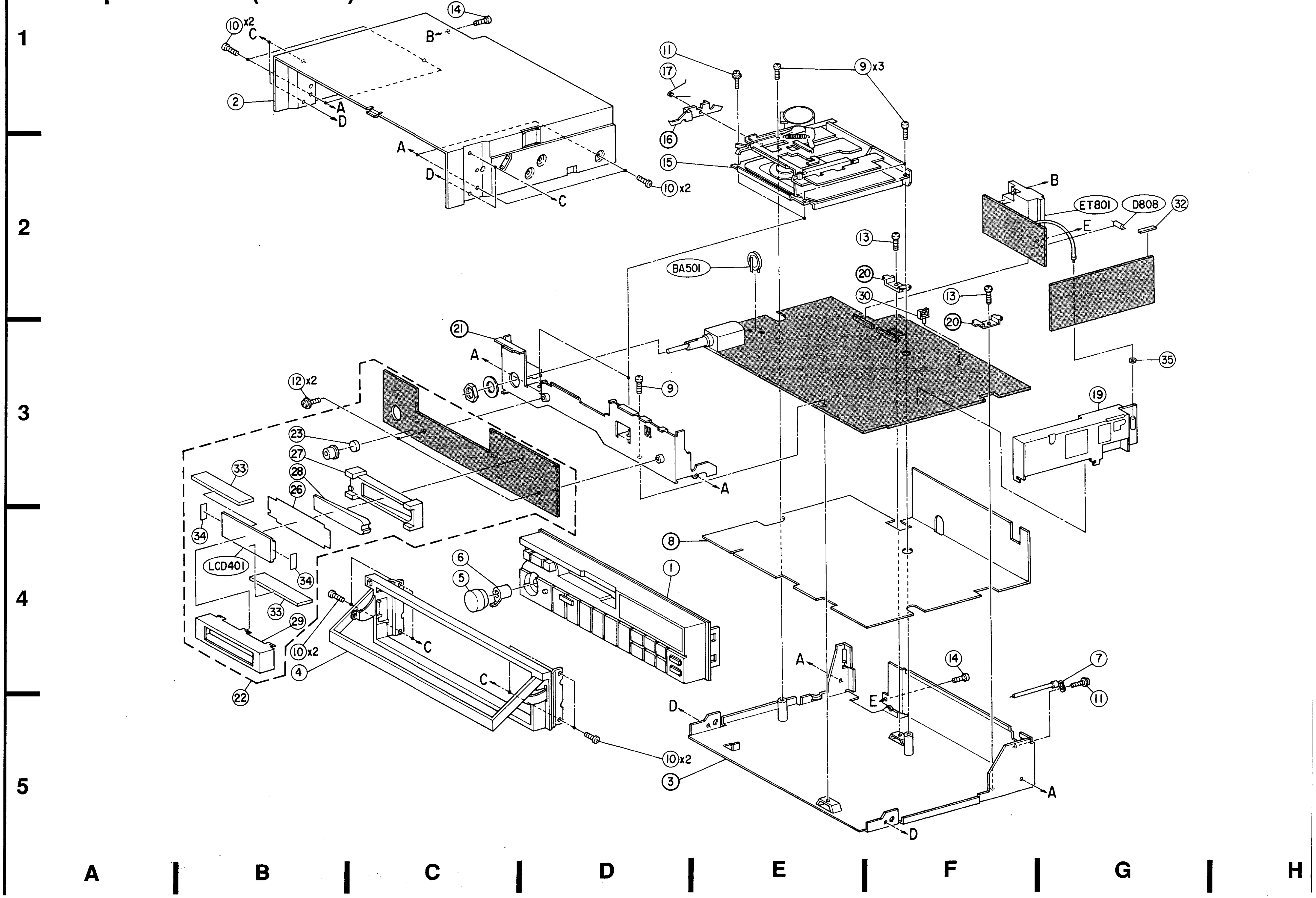

PIN 18
B 17
RF 16
PLAY 15
Vcc 14
EJECT 13
GND 12
GABNA 11
M OUT2 10
LOGIC
1 E IN
2 RF IN
3 MC
4 FS
5 SS
6 VREF
7 VREG
8 M OUT1
9 NC

M51143AL : IC1502




LIMITER AMP OUTPUT
2
CR TERMINAL
6
OUTPUT
7
Vcc
LIMITER AMP INPUT 1
LIMITER AMP
SWITCHING CIRCUIT
Q1
Q2
Vcc/2
COMPARATOR (1)
S
R
FF2
Q
Q5
R
FF1
S
Q3
Q4
Vcc
CONTROL INPUT 4
POWER ON RESET MUSIC SELECTION START SENSOR SWITCH
VREG
COMPARATOR (2)
8 Vcc
3 GND
5 NOISE FILTER

Exploded View (Cabinet)

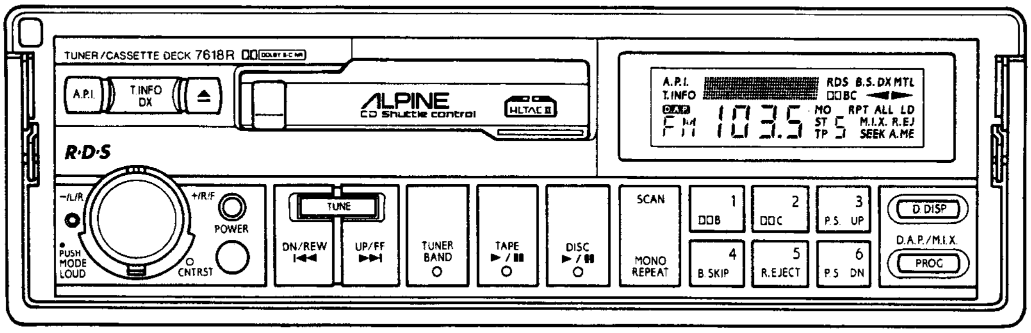

1
2
3
4
5
A
B
C
D
E
F
G
H
⑩x2
C
⑭
B
②
A
D
A
D
C
⑩x2
⑪
⑰
⑨x3
⑯
⑮
B
ET801
D808
32
E
⑬
BA501
⑳
30
⑬
⑳
㉑
A
⑨
35
⑫x2
23
27
28
33
26
34
LCD401
34
33
29
22
⑩x2
④
C
C
⑥
⑤
①
⑲
A
⑧
A
⑭
⑦
E
⑪
D
⑩x2
③
A
D

ALPINE SERVICE MANUAL

FM/MW/LW/RDS Cassette Player

REVISED

- Serial Number after No. 10817501M
- The model descrived in this manual is developed from Model 7618R. For information that is not mentioned in this service manual refer to the Service Manual 7618R (68P40971W02).
- For the cassette deck mechanism parts (GR75H030) of this model, refer to the Service Manual • GR/GR-Y Series (68P20504W05).


TUNER/CASSETTE DECK 7618R
A.P.I.
T.INFO DX
ALPINE CD Shuttle control
HLTAC II
R·D·S
A.P.I.
T.INFO
RDS B.S. DX MTL
FM 103.5
MO RPT ALL LD
ST M.I.X. R.EJ
TP SEEK A.ME
-/L/R
+/R/F
POWER
PUSH MODE LOUD
CNTRST
TUNE
DN/REW
UP/FF
TUNER BAND
TAPE ►/❚❚
DISC ►/❚❚
SCAN
MONO REPEAT
1 DOB
2 DDC
3 P.S. UP
4 B.SKIP
5 R.EJECT
6 P.S. DN
D DISP
D.A.P./M.I.X.
PROC

7618R

Electrical Parts List

Note : The parts is not mentioned, refer to the Service Manual 7618R (68P40971W02).

Symbol No.	Part No.	Description
Main P. C. Board		
IC's / Transistor		
IC501	51T25699W29	25699W29
IC505	51T35181W01	35181W01
Q801	48T15289W01	TR., 2SD2008
Diodes		
D806	48T52446F01	CP., MA151WK
D899	48T68828F01	1SS133
Resistors (All resistors are chip 1/10W ± 5% unless otherwise noted.)		
R579	06S64995F69	4.7K ohm
R899	06T70072F29	100 ohm 1/4W
Front P. C. Board		
IC / Lamps		
IC402	51T35182W01	IC, 35182W01
PL405	65T95083F04	6.7V-85mA
PL406	65T95083F05	6.7V-85mA
Resistors (All resistors are chip 1/4W ± 5% unless otherwise noted.)		
R404	06T70072F21	47 ohm
R408	06T70072F21	47 ohm
R409	06T70072F25	68 ohm
R410	06T70072F25	68 ohm
R412	06T70072F21	47 ohm
R438	06T70072F88	7.5 ohm
MPX & Dolby P. C. Board		
Coil / Capasitor		
L701	24T25798W13	Inductor, 1mH
E301	23T25149W12	CAP., ELY 47μF / 16V
Resistors (All resistors are chip 1/10W ± 5% unless otherwise noted.)		
R701	06S64995F91	39K ohm

Cabinet Assembly Parts List

Note : The parts is not mentioned, refer to the Service Manual 7618R (68P40971W02).

Symbol No.	Index	Part No.	Description
9		03S44205G29	Screw, Pan (M2.6 × 6)
26	3-B	26A31424W05	Sheet, LCD
32	2-G	75S12196W06	Pad, Cushion
34	4-B	14S31757W35	Insulator, Cover
35	3-G	04B41345P11	Washer, Lock (M1.2)

Packing Assembly Parts List

Note : The parts is not mentioned, refer to the Service Manual 7618R (68P40971W02).

Symbol No.	Part No.	Description
108-4	68P22493W84	Owner's Manual

Symbol No.	Part No.	Description

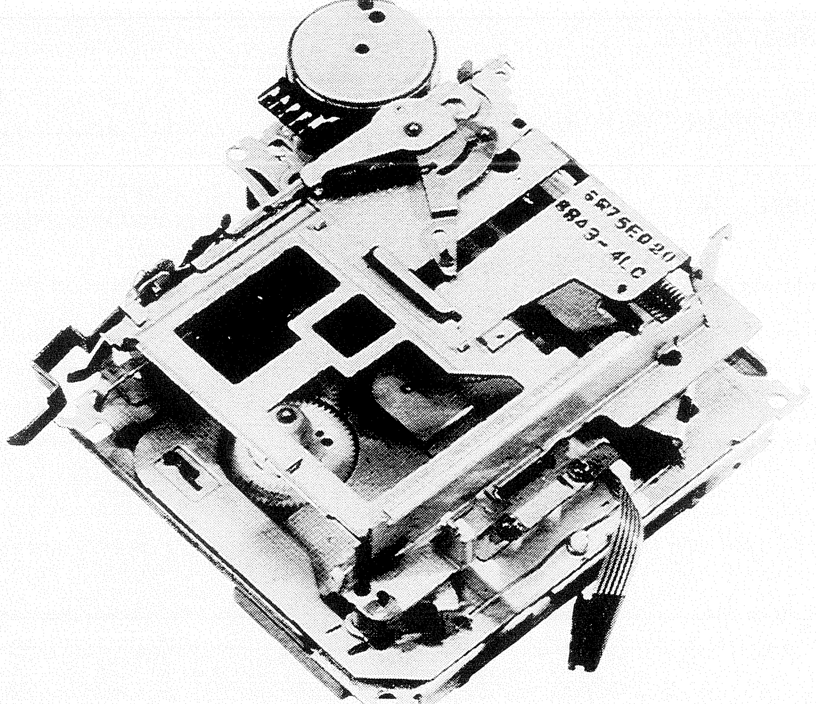
ALPI-00293

ALPINE®

SERVICE MANUAL

Cassette Deck Mechanism

ADDENDUM & REVISED(V)


6R7SE020
8843-4LC

GR/GR-Y SERIES

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List of Usable Oil 3

List of Usable Jigs 3

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Cassette Deck Assembly Parts List (GR75E Series) (1/4) .... 19 to 20

Exploded View (GR75L Series) (2/4) .... 21 to 22

Cassette Deck Assembly Parts List (GR75L Series) (2/4) .... 23 to 24

Exploded View (GR-Y Series) (3/4) .... 25 to 26

Cassette Deck Assembly Parts List (GR-Y Series) (3/4) .... 27 to 28

Exploded View (GR75H Series) (4/4) .... 29 to 30

Cassette Deck Assembly Parts List (GR75H Series) (4/4) .... 31 to 32

List of Usable Lock Washers

	SIZE	PARTS NO.	QUANTITY			
			GR75E Series	GR75L Series	GR-Y Series	GR75H Series
1	(M1.2 × 3.5 × 0.25)	04B41345P01	4	4	4	2
2	(M1.7 × 3.5 × 0.25)	04B41345P02	1	1	1	4
3	(M1.2 × 2.5 × 0.25)	04B41345P11	8	8	8	9
4	(M1.7 × 3.5 × 0.35)	04B41345P12	2	2	2	2
5	(M1.2 × 3.5 × 0.35)	04B41345P15	2	2	2	2
6	(M1 × 2.5 × 0.25)	04B41345P17	1	1	1	2
7	(M2.6 × 5 × 0.25)	04B41345P29	1	1	1	1
8	(M3.1 × 8 × 0.05)	04B41345P30	1	1	1	1
9	(M3.1 × 5 × 0.35)	04B41345P32	2	2	2	2
10	(M1.2 × 2.5 × 0.3)	04B41345P34	1	1	1	0
11	(M1.7 × 2.8 × 0.25)	04B41345P35	1	1	1	2
12	(M2.1 × 4 × 0.25)	04B41345P37	1	1	1	0
13	(M2.1 × 4 × 0.13)	04S40075G05	2	2	2	0
14	(M2.1 × 4 × 0.3)	04S40075G58	0	0	0	1

List of Usable Oil

1) Molykote G paste
2) Grease EM-30L
3) Grease PG-671

List of Usable Jigs

1) GR bottom gear jig (Part No. 44A20788W01)
2) Head height adjustment gauge
   AI-500 (Part No. AI-500)

Memo

Disassembly, Assembly and Replacement of Functional Parts

1. Disassembly and Assembly of Bottom Cover

(1) Turn the mechanism around as shown in Figure 1.
(2) Remove M1 lock washer ① as shown in Figure 1.
(3) Remove three screws ② as shown in Figure 1.
(4) Lift the bottom cover slowly from the position Ⓐ-1, pull the hooks out of the holes in the chassis, and remove the bottom cover as shown in Figure 1.
(5) When remounting the bottom cover, first turn the front of the mechanism up as shown in Figure 2.
(6) Slide the slider in the direction Ⓐ-2 as shown in Figure 2.
(7) Push down the cassette holder in the direction Ⓐ-3 as shown in Figure 2.
(8) Pull the door pin in the direction Ⓐ-4 so that the mechanism is locked in as shown in Figure 2.
(9) Turn the mechanism around as shown in Figure 3.
(10) Pull the automatic metal lever in the direction Ⓐ-5 and the RF solenoid chip in the direction Ⓐ-6 as shown in Figure 3.
(11) Insert the hooks of the bottom cover into the chassis in the direction Ⓐ-7, and then join the part Ⓐ-8 of the bottom cover to the chassis slowly, making sure that the 3 points indicated with the straight lines in the Figure 3 are fitted properly.
If there are troubles in mounting the bottom cover, do not apply force but remove the bottom cover once again and check the positions of the individual parts. (Refer to Figure 3.)
(12) Since the hooks marked Ⓐ-8 will be lifted slightly as shown in Figure 4, insert the jig through the hole Ⓐ-9, and fix it turning the jig slightly in the direction Ⓐ-11.
Instead of operation (12), turn the gear nose slowly with a precision screwdriver etc., taking care not to damage it.
After 2 to 3 turns, it will click into place.
(Refer to Figures 4 and 5.)
(13) Fix the screws and the lock washer that have been removed.

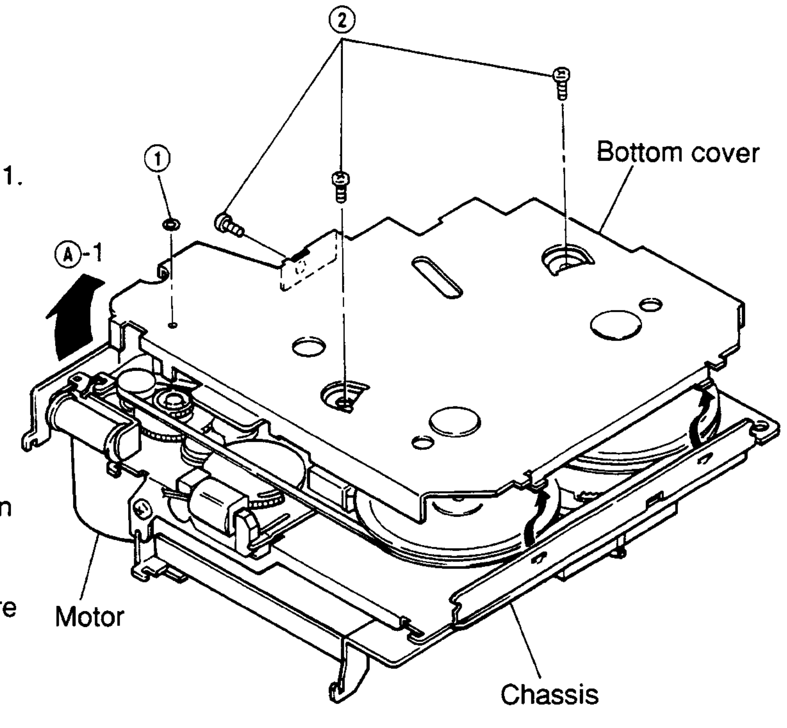


Figure 1

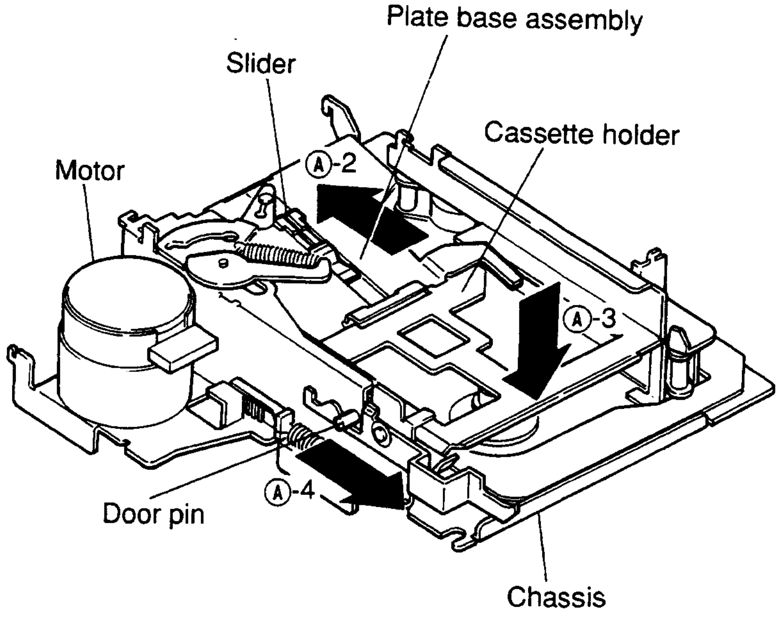


Figure 2

(14) Insert the jig into the hole Ⓐ-9 as shown in Figure and rotate the eject solenoid counterclockwise about 20 times, pulling it in the direction Ⓐ-10 with the finger.
Then the eject operation is completed.
Instead of operation (14), the eject operation can be performed by mounting the mechanism to the product. (Refer to Figures 4 and 5.)

Note: Do not reuse the used lock washers for mounting.
When turning the mechanism, be careful not to drop the gear and the flywheel.
Fasten the three screws with a fastening torque of 6 kg.cm.

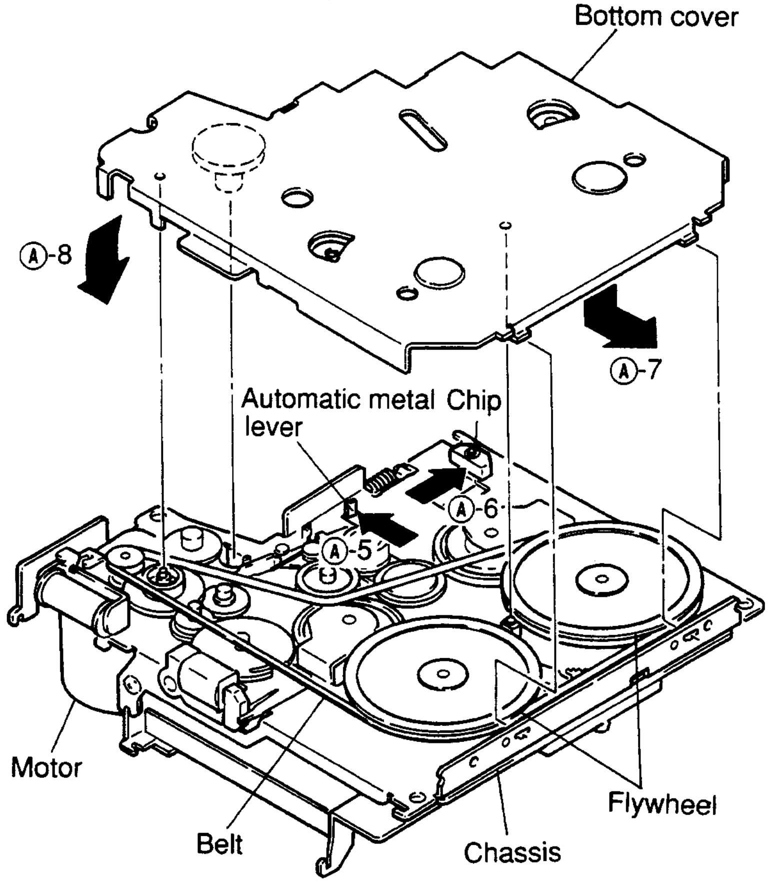


Figure 3

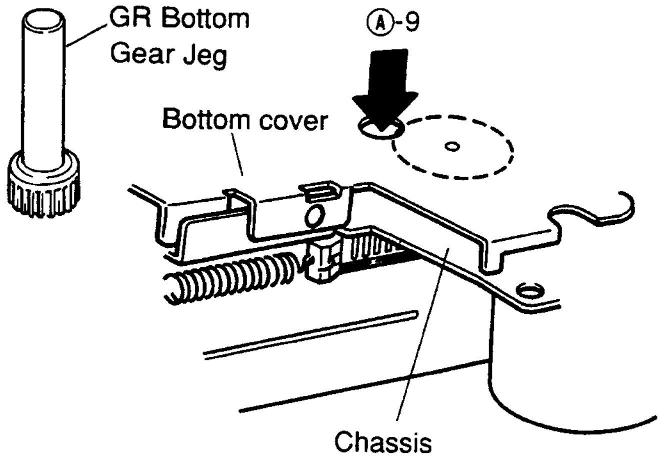


Figure 4

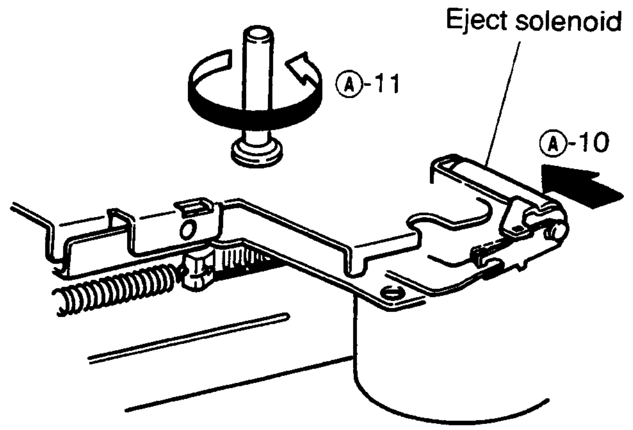


Figure 5

2. Replacement of the bottom cover mounting parts

a. Replacement of the eject gear

(1) Remove M1.2 lock washer ③ as shown in Figure 6.
(2) Pull the eject pinion out of the eject gear and remove the eject gear as shown in Figure 6.
(3) Apply the molykote E paste to the section Ⓑ-1, and mount the eject gear following the removal steps in the reverse order. After replacement is finished, make sure that the gear rotates smoothly. (Refer to Figure 6.)

Note: Do not reuse the used lock washers for remounting.
Take care to avoid damage by piercing and tearing.

b. Replacement of the RF solenoid

(1) Remove two solders ④ and remove the RF solenoid from the bottom cover by pulling it up as shown in Figure 6.
(2) Replace the solenoid with a new one, and remount it following the removal steps in the reverse order as shown in Figure 6.

Note: When removing solder ④, set the temperature of the soldering iron to 350° ± 10° and the soldering time to 1 – 3 seconds. Take care that the solder is not loose, that there is no shortcircuit and that the coating is not damaged.

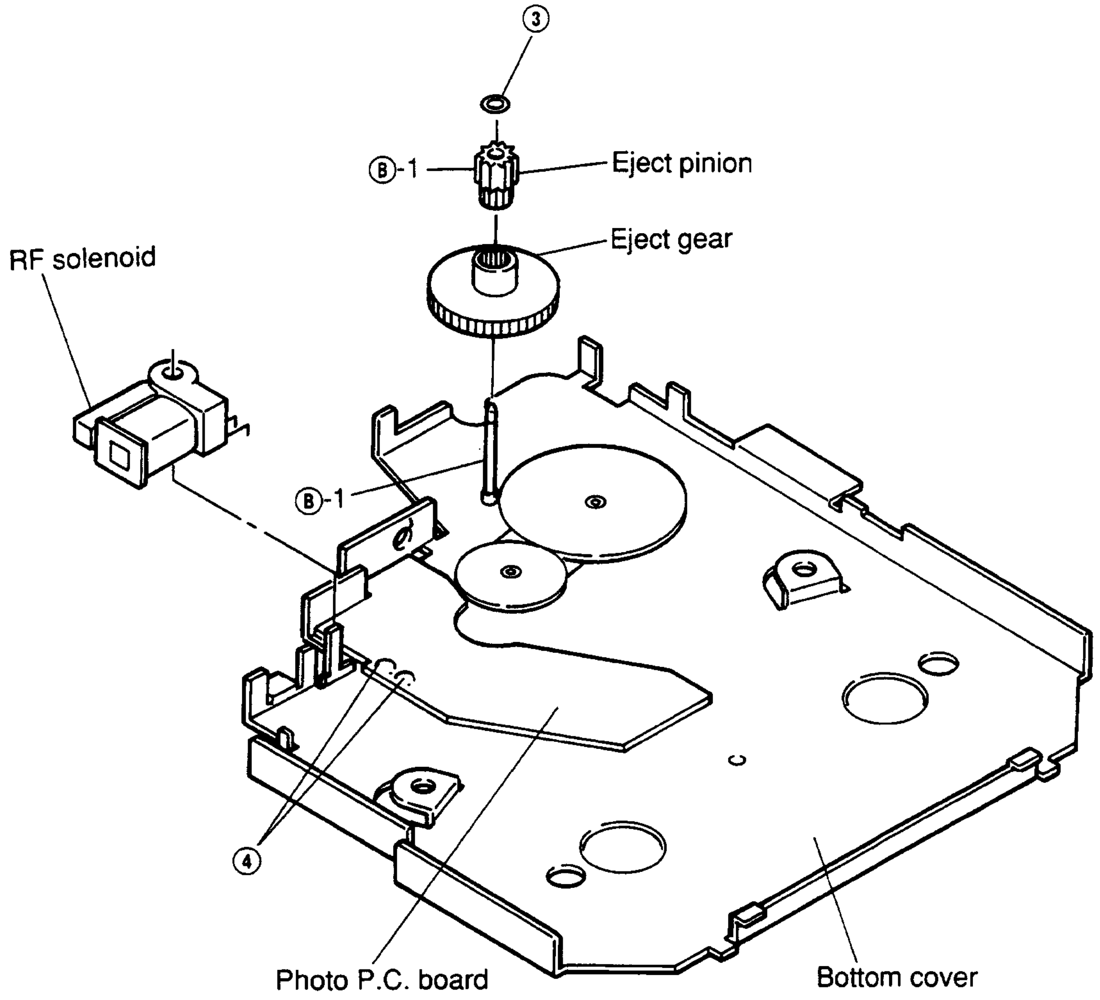


Figure 6

c. Replacement of the photo sensor

(1) Remove four solders ⑤ as shown in Figure 7.
(2) Remove the photo guide together with the photo sensor from the photo P.C. board as shown in Figure 7.
(3) Insert the new photo sensor into the photo guide, and bend the legs of the photo sensor in the direction marked Ⓑ-2 as shown in Figure 7.
(4) Insert the photo guide into the P.C. board and solder the legs so that the photo sensor is set as indicated by ⬚ in Figure 7.

Note: When using the soldering iron, set the temperature of the soldering iron to 350° ± 10° and the soldering time to 1 – 3 seconds. Take care that the solder is not loose, that there is no shortcircuit and that the coating is not damaged. Also take care that the photo guide is properly fixed and straight.

d. Replacement of the detector switch (Automatic metal pack-in)

(1) Remove 4 solders ⑥ with which the switch is fixed as shown in Figure 7.
(2) Prepare the terminals of the switch of the new solder as shown in Figure 8.
(3) After that, insert the switch into the photo P.C. board, and solder the terminals.

Note: When using the soldering iron, refer to Item 2-C to make sure that the temperature of the soldering iron and the soldering time are proper. Also take care that the switch guide is properly fixed and straight.

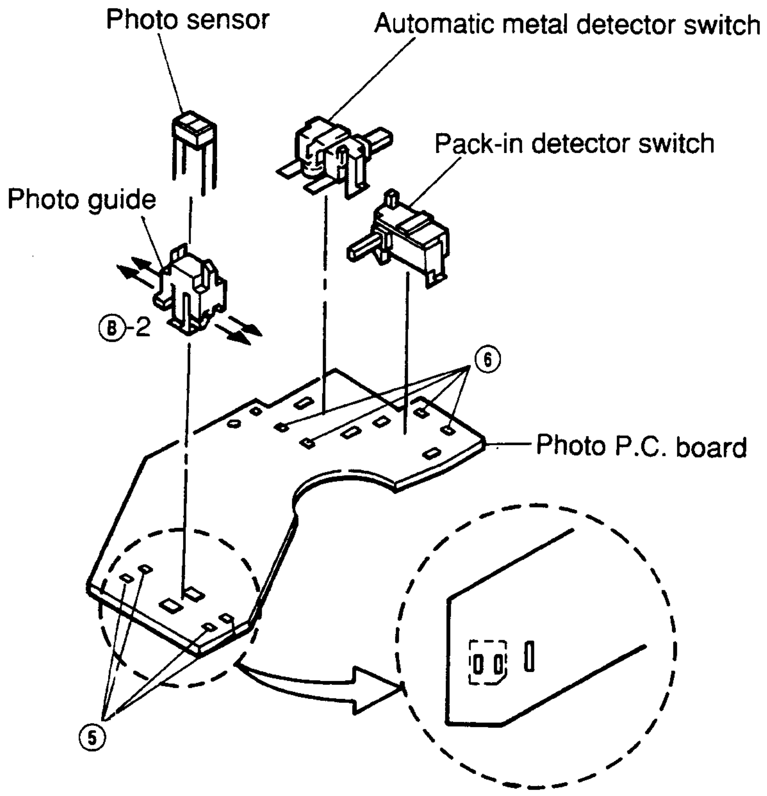


Figure 7

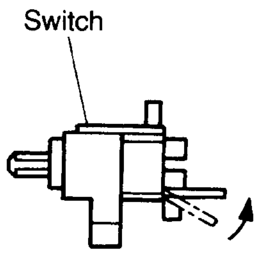


Figure 8

3. Replacement of the mounting parts on the rear of the main chassis

a. Replacement of the belt

(1) After removing the bottom cover, remove the belt.

(2) Clean the new belt with absolute alcohol, and fix it as shown in Figure 9.

Note: When fixing the belt, make sure that it is not twisted or dirty. When removing the belt, do not turn up the front of the chassis.

b. Replacement of the motor

(1) After removing the belt, remove spring ⑦ as shown in Figure 10.

(2) Remove solder ⑧-1, and remove the parallel wire (5P) from the control P.C. board as shown in Figure 11.

(3) Remove two screws ⑨ and ⑩, and remove the motor, taking care not to damage the motor idler gear. (Refer to Figure 10.)

(4) Mount the new motor following the removal steps in the reverse order.

Note: Refer to Item 2-C to make sure that the temperature of the soldering iron and the soldering time are proper. Since the parallel wire is very easily damaged, handle it with care.
Fasten the two screws with a fastening torque of 3 kg.cm.

*When inserting the clutch spring, be careful of the inserting direction as shown in the Figure.

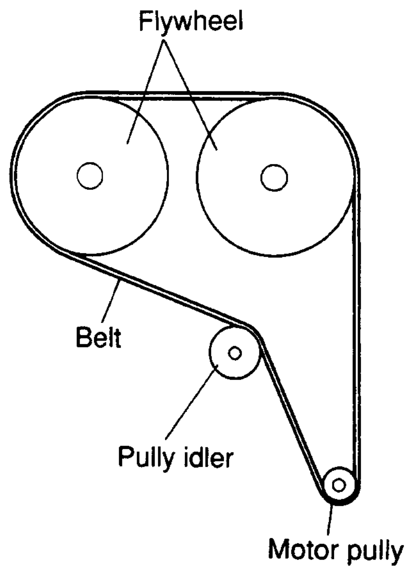

Flywheel
Belt
Pully idler
Motor pully

Figure 9

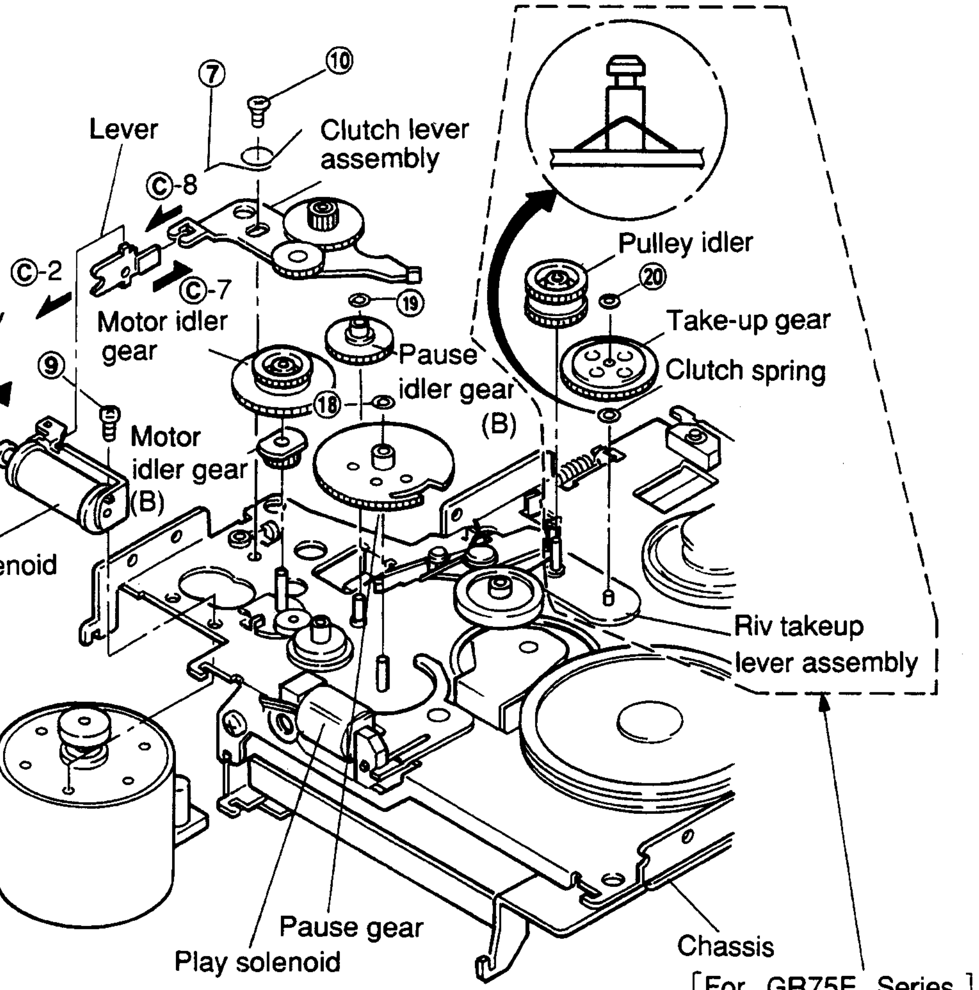

⑦
⑩
Lever
Clutch lever assembly
ⓒ-8
ⓒ-2
ⓒ-7
⑲
Motor idler gear
⑨
ⓒ-1
Pause idler gear (B)
⑱
Motor idler gear (B)
Pulley idler
⑳
Take-up gear
Clutch spring
Eject solenoid
Riv takeup lever assembly
Motor
Pause gear
Play solenoid
Chassis

Figure 10

[For GR75E Series
GR75L Series
GR-Y Series
models]

c. Replacement of the flywheels

(1) After removing the belt, pull out the two flywheels. Take care not to loose the polyslider washer ⑪ located between the flywheel and the chassis. (Refer to Figure 12.)

(2) Fix the polyslider washer to the new flywheel and mount the flywheel to the chassis.

d. Replacement of the play solenoid

(1) Remove the two solders ⑧-2 as shown in Figure 11.

(2) Remove one screw ⑫ and remove the solenoid as shown in Figure 11.

(3) Mount the new solenoid following the removal steps in the reverse order.

Note: Refer to Item 2-C to make sure that the temperature of the soldering iron and the soldering time are proper. Fasten the screws with a fastening torque of 2.3 kg.cm.

e. Replacement of the eject solenoid

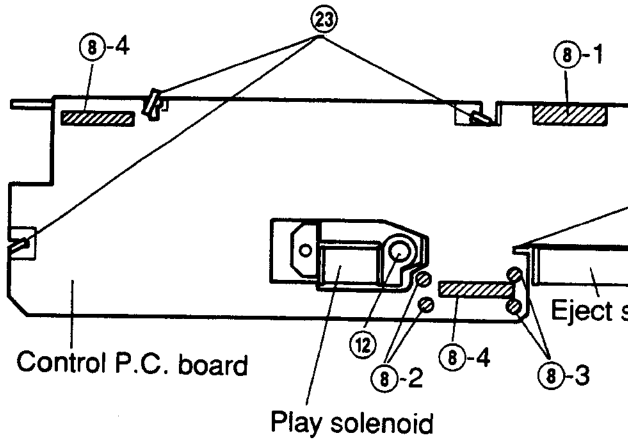
(1) Remove two solders ⑧-3. Take care not to loose the tube that protects the wire. (Refer to Figure 11.)

(2) Remove screw ⑨ and remove the solenoid as shown in Figure 10.

(3) Align position ⓒ-1 of the new solenoid with position ⓒ-2 of the lever and fasten the screw as shown in Figure 10.

(4) Lead the wire through the tube and solder it.

Note: Refer to Item 2-C to make sure that the temperature of the soldering iron and the soldering time are proper. Fasten the screws with a fastening torque of 3 kg.cm. As the solenoid wires are not insulated, do not let them cross each other.


㉓
⑧-4
⑧-1
㉓
Eject solenoid
Control P.C. board
⑫
⑧-2
⑧-4
⑧-3
Play solenoid

[For GR75E Series model]

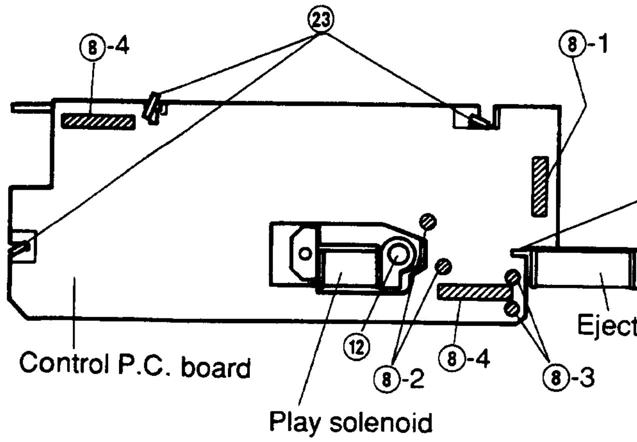

㉓
⑧-4
⑧-1
㉓
Eject solenoid
Control P.C. board
⑫
⑧-2
⑧-4
⑧-3
Play solenoid

Figure 11

[For GR75L Series
GR-Y Series
GR75H Series models]

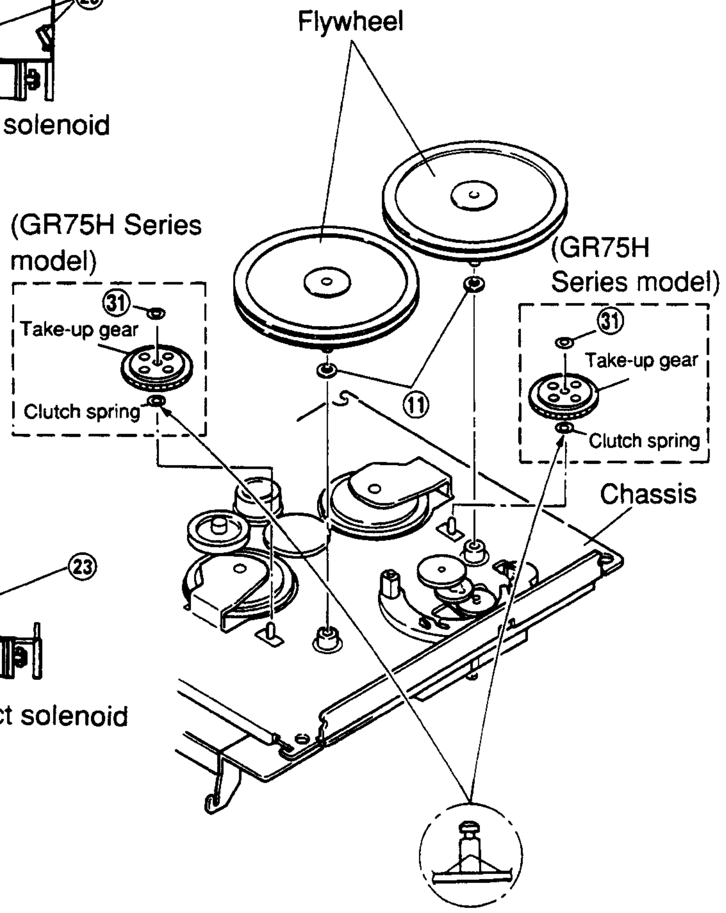

Flywheel
(GR75H Series model)
㉛
Take-up gear
Clutch spring
(GR75H Series model)
㉛
Take-up gear
Clutch spring
⑪
Chassis

Figure 12

1

f. Replacement of gears

(f-1) Replacement of the reverse idler gear

(1) Remove M1.2 lock washer ⑬, pull it up from the stud of the chassis and remove the gear as shown in Figure 13.

(2) Remount following the removal steps in the reverse order.

(f-2) Replacement of the sun gear

(1) Remove M1.2 lock washer ⑭, pull it up from the stud of the chassis and remove the gear as shown in Figure 13.

(2) Mount it, following the removal steps in the reverse order.

(f-3) Replacement of the fixing gear

(1) Adjust the two mounting claws for the fix gear on the chassis ⑮ and remove the section ⓒ-3 of the gear by pulling it up in the direction of the arrow shown in Figure 13.

(2) Insert the section ⓒ-4 of the new gear into the chassis, and mount it following the removal steps in the reverse order as shown in Figure 13.

(f-4) Replacement of the reverse lever assembly and planet gear

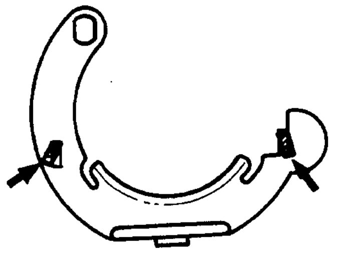
(1) Remove both the fixing gear and the sun gear and remove the reverse lever assembly as shown in Figure 13.

(2) Remove M1.7 lock washer ⑯ and remove the planet gear as shown in Figure 14.

(3) Mount the new planet gear and reverse lever following the removal steps in the reverse order.

Notes on f-1 through f-4:
After mounting all parts, check if the reverse lever moves in the directions marked ⓒ-5 when the reverse gear is turned clockwise and counterclockwise.

*After mounting the fixing gear, bend the claws ⑮ into the form of as shown in the Figure.



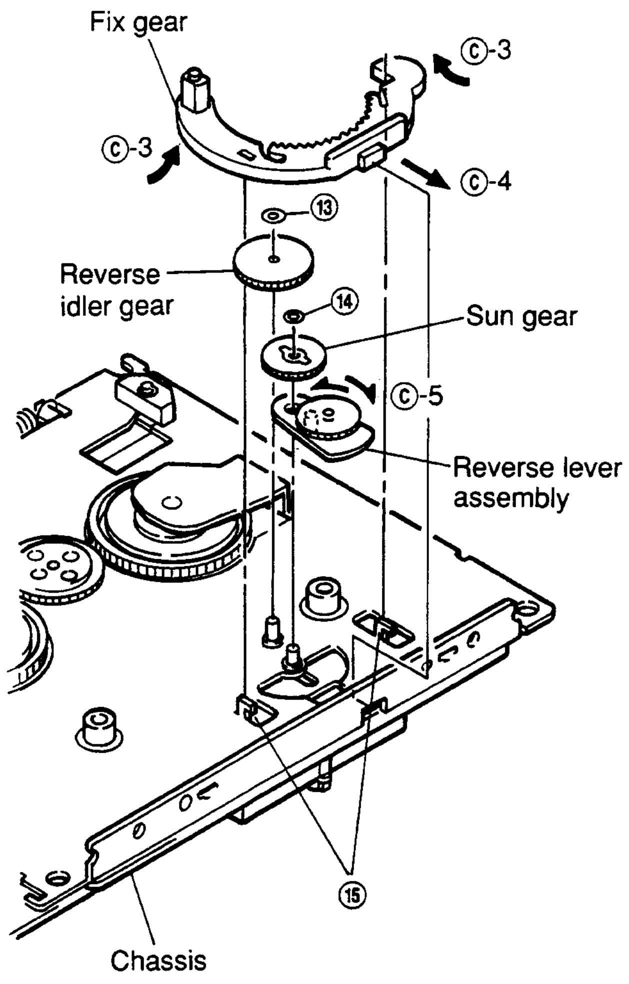


Figure 13

(f-5) Replacement of the clutch lever assembly and eject idler gear

(1) After removing the motor, remove the motor idler gear and the motor idler gear (B) and remove the clutch lever assembly as shown in Figure 10.

(2) Remove M1.2 lock washer ⑰ and remove the eject idler gear as shown in Figure 15.

(3) Mount the new gears and clutch lever following the removal steps in the reverse order.

Note: When mounting the gears to the lever, apply grease (PG-671) to the position ⓒ-6 as shown in Figure 15. Align the position ⓒ-7 with the position ⓒ-8 and mount the clutch lever as shown in Figures 10 and 15.

(f-6) Replacement of the pause gear

(1) Remove M1.2 lock washer ⑱ and remove the pause gear pulling it up from the stud of the chassis as shown in Figure 10.

(2) Mount the new gear following the removal steps in the reverse order.

(f-7) Replacement of the pause idler gear (B)

(1) After removing the motor and the motor idler gear, remove M1.2 lock washer ⑲ and remove the gear by pulling it up from the stud of the chassis as shown in Figure 10.

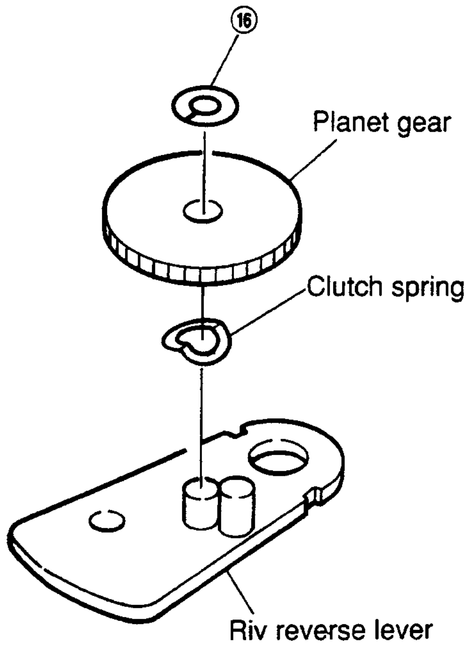
(2) Mount the new gear by following the removal steps in the reverse order.

(f-8) Replacement of the take-up gear

(1) After removing the belt and the pulley idler gear, remove M1.2 lock washer ⑳ by pulling it up from the stud of the riv take-up lever assembly as shown in Figure 10.
After removing the Flywheel, remove M1.2 lock washer ㉛ and remove the gear by pulling it up from the stud of the chassis as shown in figure 12. [For GR75H Series model]

(2) Remount the take-up gear following the removal steps in the reverse order.

Notes on f:
Do not reus e the used washers. Take care to avoid damage by piercing and tearing.



[Disassembly Reverse Lever Assembly]

Figure 14

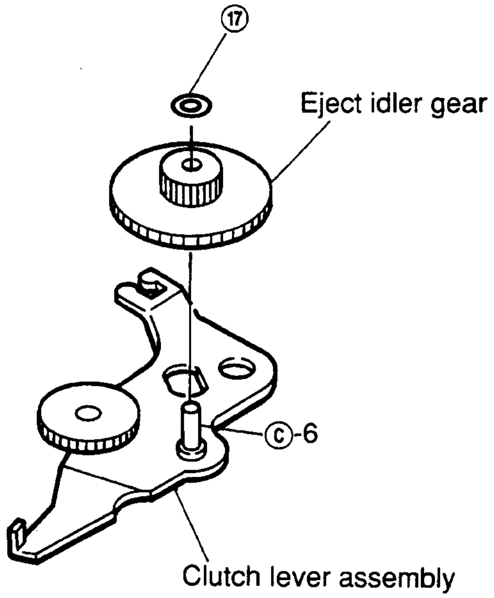


Figure 15

4. Replacement of the parts mounted on the front of the main chassis

a. Replacement of the audio P.C. board

(1) Remove two solders ㉑ and remove the parallel wire (7P) and the head P.C. board as shown in Figure 16.
(2) Adjust the two claws ㉒ to the rectangular holes on the P.C. board and remove the P.C. board as shown in Figure 16.
(3) After replacement, mount the new P.C. board following the removal steps in the reverse order.

Note: The head P.C. board and the parallel wire are easily damaged. Handle them with care. Refer to Item 2-C to make sure that the temperature of the soldering iron and the soldering time are proper. Do not bring the soldering iron near the head P.C. board.

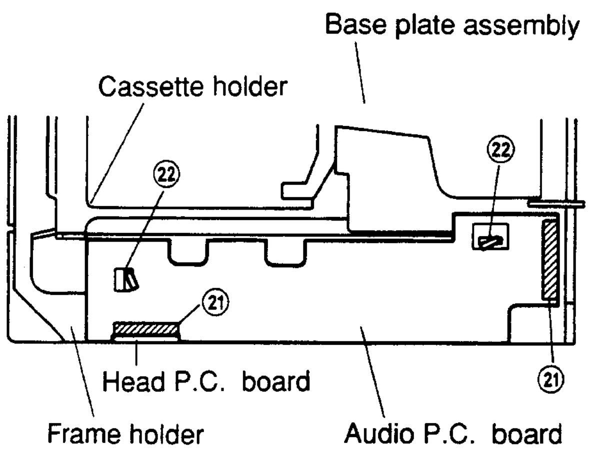


Figure 16

b. Replacement of the control P.C. board

(1) Remove seven solders ⑧ and remove the three parallel wires and the wires of the eject solenoid and of the play solenoid as shown in Figure 11.
(2) Remove five claws ㉓ and remove the P.C. board as shown in Figure 11. [For GR75E Series model] Remove four claws ㉓ and remove the P.C. board as shown in Figure 11. [For GR75L Series, GR-Y Series, GR75H Series models]
(3) After replacing the old P.C. board with a new one, mount it following the removal steps in the reverse order.

Note: As mentioned in Item 4-a, handle the parallel wires carefully, and be sure that the temperature of the soldering iron and the soldering time are proper. As the wires of the eject solenoid are not insulated, do not let them cross each other.

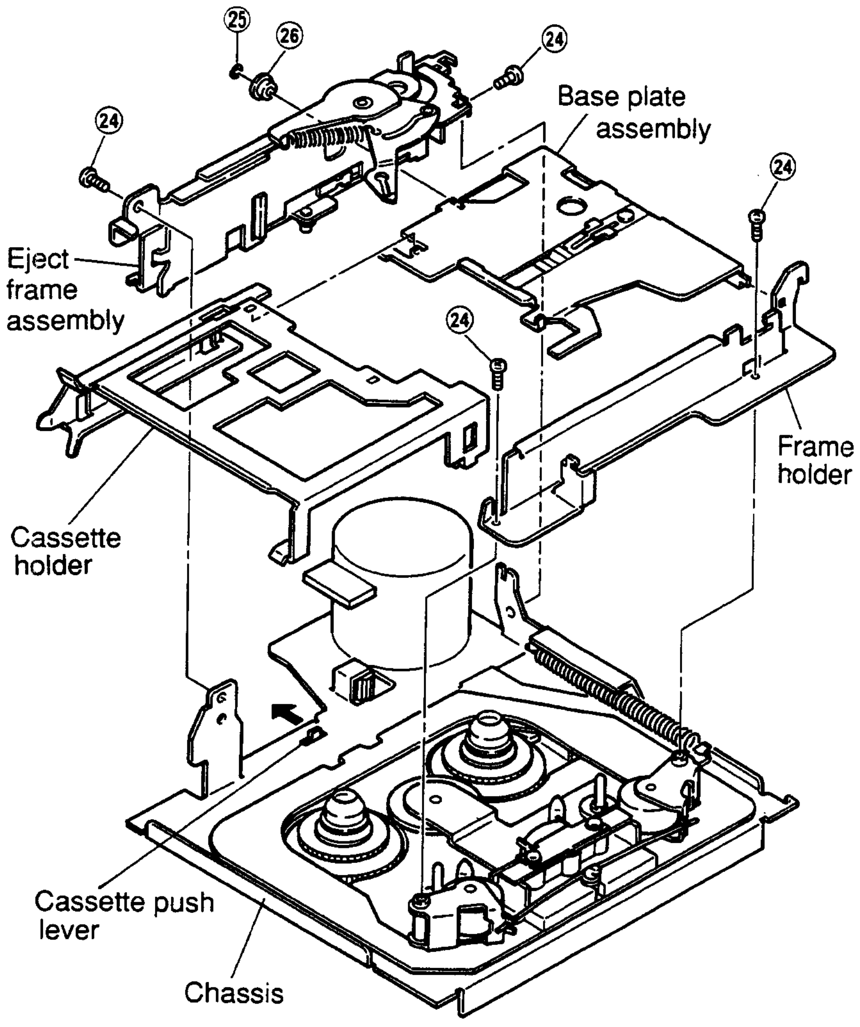


Figure 17

c. Disassembly and assembly of the cassette holder

(1) Remove four screws ㉔ and remove the eject frame assembly and the frame holder as shown in Figure 17.
(2) Remove M1.2 lock washer ㉕ and plate base roller ㉖ and remove the cassette holder and the base plate assembly as shown in Figure 17.
(3) Remount them following the removal steps in the reverse order.

Notes:
1. When mounting the cassette holder and the base plate, insert the slider shaft into the eject arm and fix them turning the slider shaft in the direction indicated by the arrow in the figure. Make sure that the cassette holder and the base plate are in the cassette-in mode during this operation. (Refer to Figure 18).
2. When mounting the eject frame assembly, push the cassette push lever in the direction indicated by the arrow in the Figure 17.
3. When mounting the base plate assembly and the eject frame assembly, or when mounting the eject frame assembly to the chassis, do not apply excessive force to avoid deformations of the eject arm and the frame.
4. Do not reuse the used washers. Take care to avoid damage by piercing and tearing.

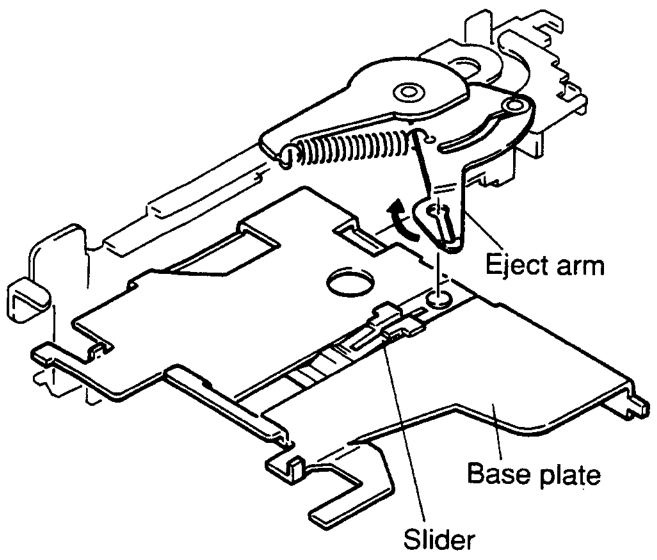


Figure 18

d. Replacement of the reels

(1) Remove M1.7 two lock washers ㉖ (Refer to figure 19).
(2) Move the select lever in the direction marked Ⓓ-1 in the Figure and remove the reel by gripping the reel gear as shown in Figure 19.
(3) After replacement, mount the new reels following the removal steps in the reverse order.
(4) After mounting, check the tape speed and the wow and flutter with test tape MTT-111.

Note: Since the reel is easily loosened if the cap is gripped, always handle it gripping the gear. Do not reuse the used washers. Take care to avoid damage by piercing and tearing.

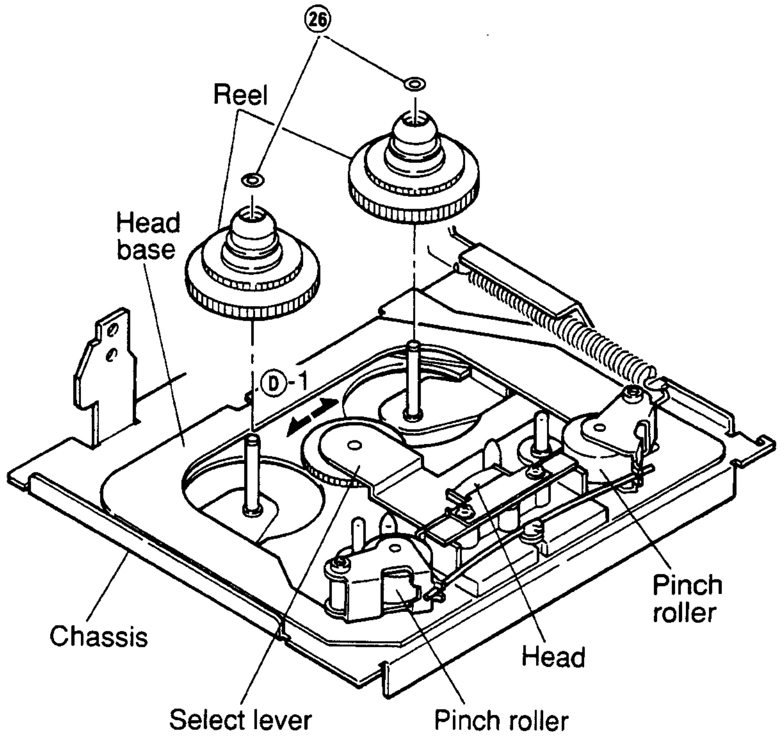


Figure 19

e. Replacement of the pinch rollers

(1) Remove pinch roller spring ㉗ as shown in Figure 20.

(2) Remove M3.1 two lock washers ㉘ and remove the pinch roller as shown in Figure 20.

(3) Mount the pinch rollers following the removal steps in the reverse order.
Apply insulation coating to the position Ⓓ-2 of the pinch roller as shown in Figure 20.

Note: Make sure that the pinch rollers are thoroughly fixed and that they are not deformed. Do not reuse used lock washers. Take care to avoid damage by piercing and tearing.

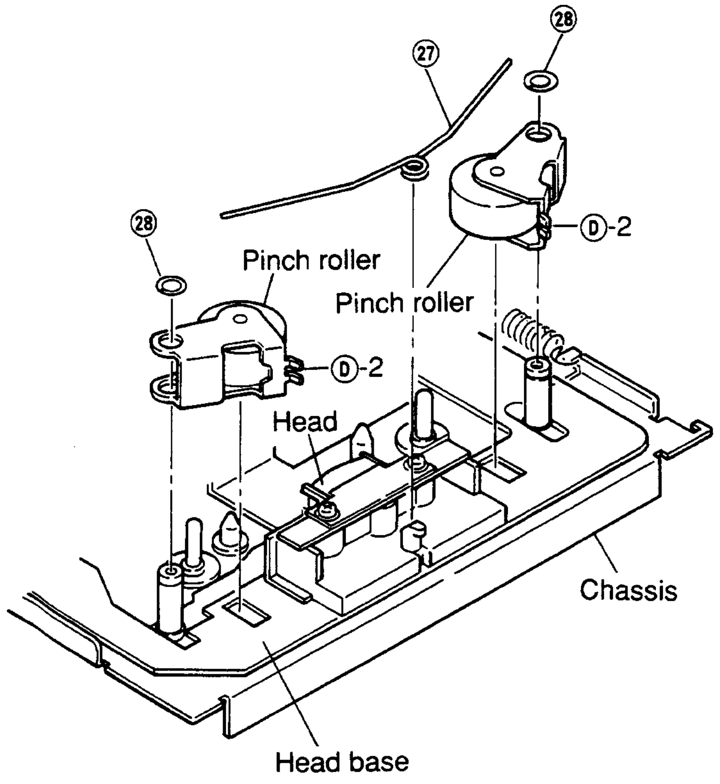

㉘
㉗
㉘
Pinch roller
Pinch roller
Ⓓ-2
Ⓓ-2
Head
Chassis
Head base

Figure 20

f. Replacement of the head

(1) After removing the pinch roller spring, remove two screws ㉙ as shown in Figure 21.

(2) Remove solder ㉚ and remove the head from the head P.C. board as shown in Figure 22.

(3) After replacement, mount the new head following the removal steps in the reverse order.

Notes: 1. Refer to Item 2-C to make sure that the temperature of the soldering iron and the soldering time are proper. Do not bring the soldering iron near the head P.C. board. Make sure that the head P.C. board is not lifted.

2. Fasten the two screws with a fastening torque of 2.3 kg.cm. Note that the tension of the head spring can be decreased if the screws are fastened too strongly.

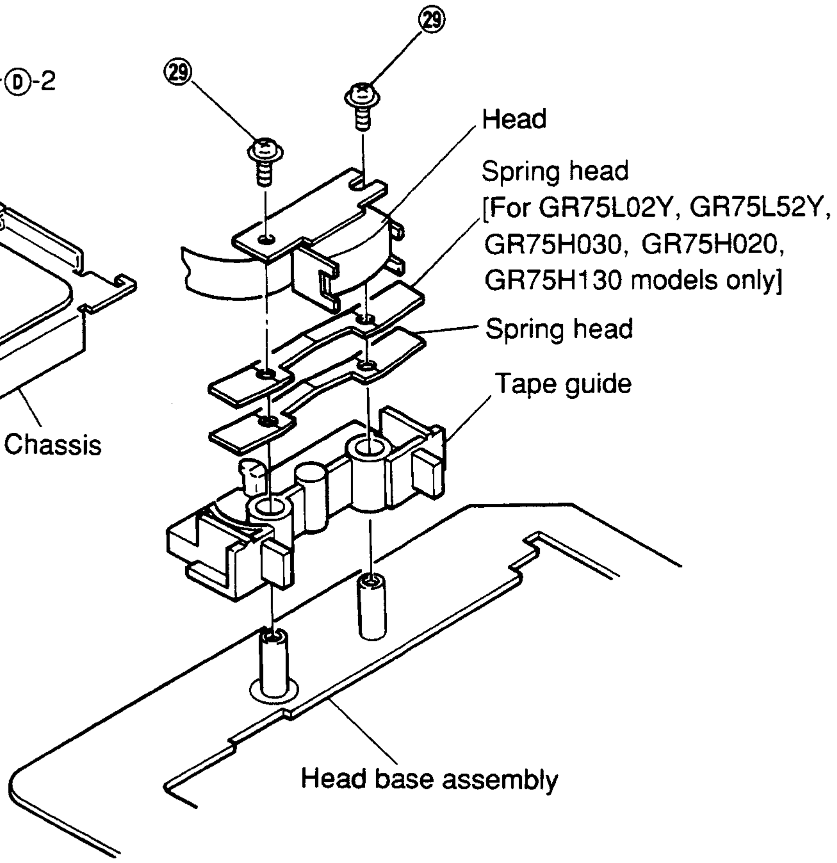

㉙
㉙
Head
Spring head
[For GR75L02Y, GR75L52Y, GR75H030, GR75H020, GR75H130 models only]
Spring head
Tape guide
Head base assembly

Figure 21

(4) Adjust the height of the head as shown in Figures 23, 24 and 25.

① Place the height adjustment gauge (AI-500) on the head base, and adjust the height so that the check bar fits in the tape head guide smoothly.

② When the check bar touches the top (or bottom) of the tape guide, insert a spacer (t 0.1 mm or polislider washer t 0.13 mm).
If necessary, remove the spacer.

Note: If you do not have a height gauge like described in (4)-①, run the tape at normal speed and adjust the height of the head and the tape head guide so that the tape does not curl.

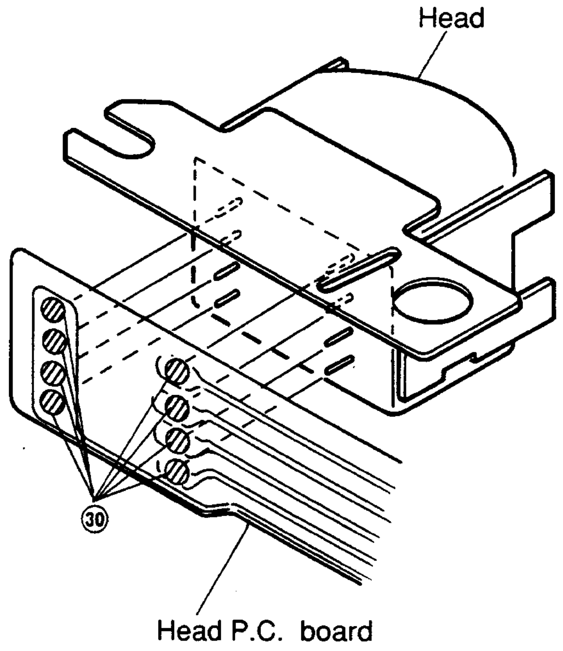

Head
㉚
Head P.C. board

Figure 22

(5) After having assembled the complete mechanism, adjust the angle of the head with test tape MTT-113C. (Refer to chapter "Adjustment of the head angle".) After the adjustment, apply the screw lock and fix the screws.

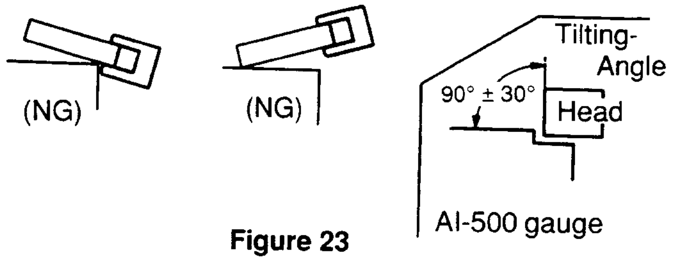

(NG)
(NG)
Tilting-Angle
90° ± 30°
Head
AI-500 gauge

Figure 23

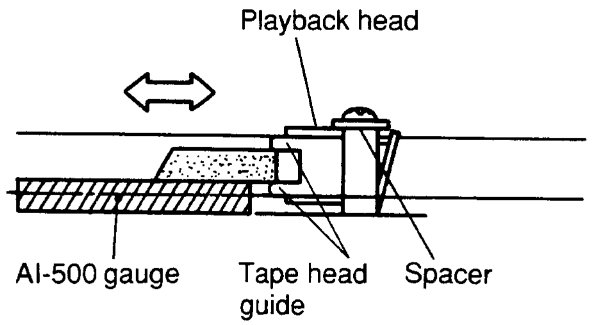
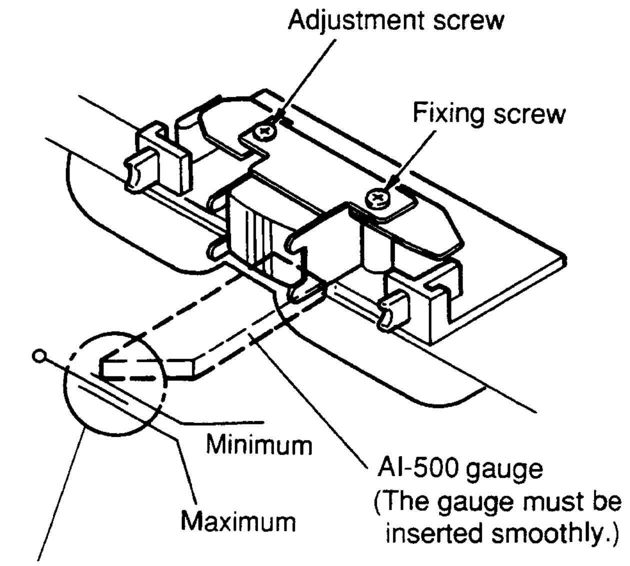

Playback head
AI-500 gauge
Tape head guide
Spacer

Figure 24

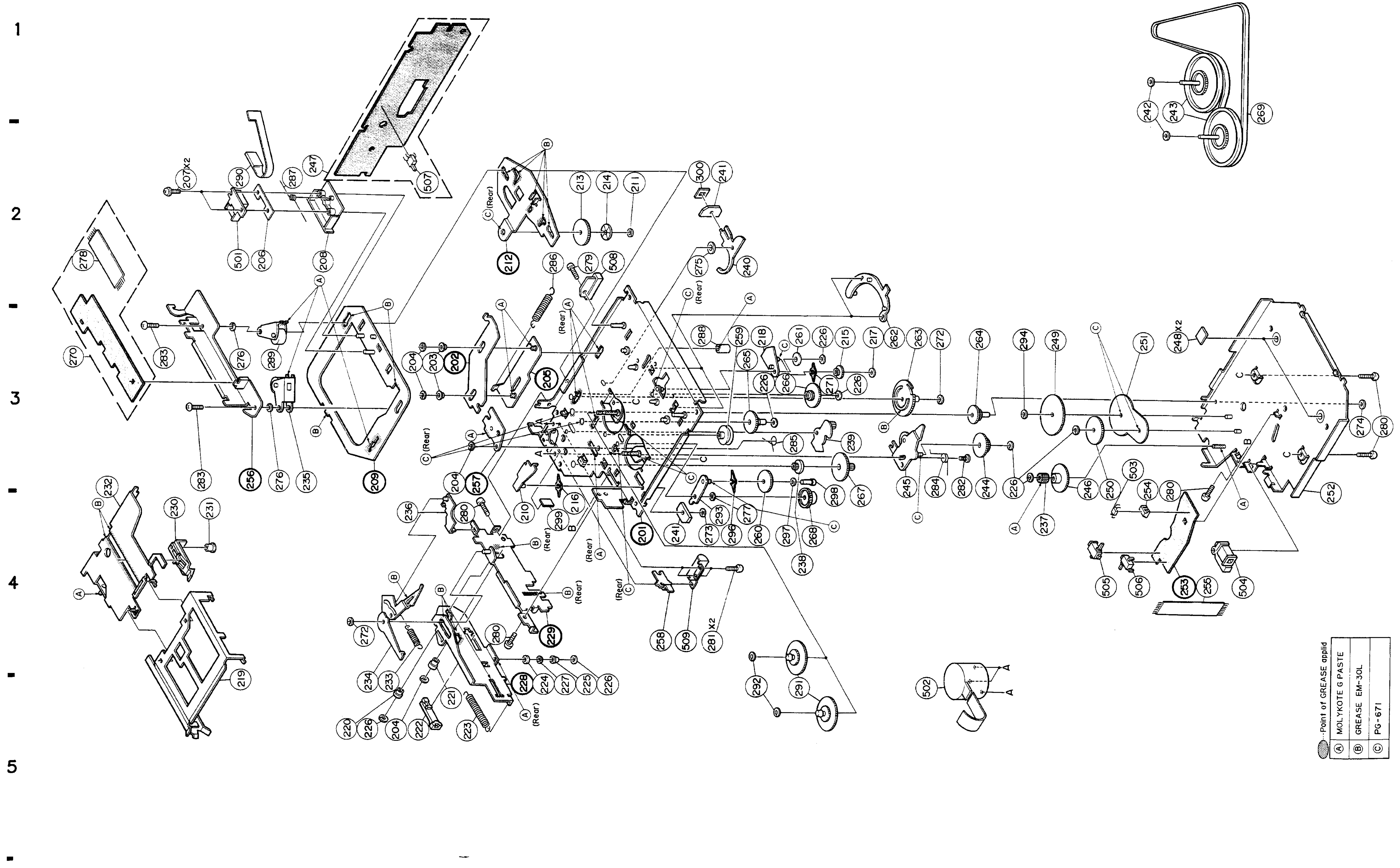

Adjustment screw
Fixing screw
Minimum
Maximum
AI-500 gauge
(The gauge must be inserted smoothly.)

The nosepiece of the gauge must be between the minimum and maximum positions.

Figure 25

Exploded View (GR75E Series) (1/4)

- **For GR75E010/01A/020 Models**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256
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235
283
209
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C (Rear)
B
213
214
211
300
241
240
275
286
279
508
202
203
204
205
(Rear) A
C (Rear)
288
259
218
261
226
215
217
262
263
272
264
294
249
251
248×2
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271
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503
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252
274
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210
216
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201
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293
296
277
260
297
238
268
298
267
237
236
280
232
230
231
219
229
(Rear)
258
509
281×2
272
234
233
220
226
204
222
221
223
280
228
224
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A (Rear)
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E
F
G
H

▨ --Point of GREASE applid

Ⓐ	MOLYKOTE G PASTE
Ⓑ	GREASE EM-30L
Ⓒ	PG-671

Cassette Deck Assembly Parts List (GR75E Series) (1/4)

Symbol No.		IN-dex	Part No.	Description
	203	3-C	43A11072W01	Roller, Sub Head
	204		04B41345P01	Washer, Lock(M1.2)
	206	2-B	41A31756W01	Spring, Head
	207	2-B	03S40019G03	Screw, F-Locks(M2x4)
	208	2-B	43B12545W01	Tape, Guide
	210	4-C	01A10206W01	Assy., Riv Lever R/F Sol
	211	2-D	04B41345P29	Washer, Lock(M2.6)
	213	2-D	44A10295W01	Gear, Sensor
	214	2-D	14A10681W01	Reflector
	215	3-E	44A30480W01	Gear, Planet
	216	3-E	41A10097W02	Spring, Clutch
	217	3-E	04B41345P35	Washer, Lock(M1.7)
	218	3-E	01A30824W01	Assy., Riv Lever Reverse
●	219	4-B	07B40283W01	Holder, Cassette
■	219	4-B	07B40283W01	Holder, Cassette
▲	219	4-B	07B10074W01	Holder, Cassette
	220	5-B	43A12583W01	Roller, Eject
	221	5-C	43A63281F01	Roller, Plate Base
	222	5-C	44A82206F01	Rack
	223	5-C	41B10386W03	Spring, GR(Rack)
	224	4-C	43A10121W01	Roller, Eject A
	225	4-D	43A10360W01	Roller, Eject B
	226		04B41345P11	Washer, Lock(M1.2)
	227	4-D	43A12377W01	Roller, Eject C
	230	4-A	45B10376W01	Slider
	231	4-B	47A63278F01	Shaft, Slider
	232	4-A	01A10212W01	Assy..Riv Plate Base
	233	4-C	41B10386W01	Spring, Eject Arm
	234	4-B	01A10148W01	Assy., Riv Eject Arm A
	235	3-B	01B30863W02	Assy., Pinch Roller
	236	4-C	45A10087W01	Lever Pack In SW
	237	4-F	44A12975W01	Pinion, Eject
	238	4-E	44A13617W01	Gear, Motor Idler(B)
	239	3-E	01A10201W02	Assy., Riv Lever Pause
	240	2-D	45A40725W01	Lever, Play Sol
	241		76T10374W01	Chip
	242	1-G	04S40075C05	Washer Polyslider (M2.1)
	243	1-G	01A10368W01	Assy., Flywheel
	244	3-F	44A10141W01	Gear, Eject Idler
	245	3-E	01A10205W02	Assy., Riv Lever Clutch A

Notes:● ; For GR75E020 model only ■ ; For GR75E010 model only
▲ ; For GR75E01A model only Others ; Common

Note : The parts without parts list are not supplied.

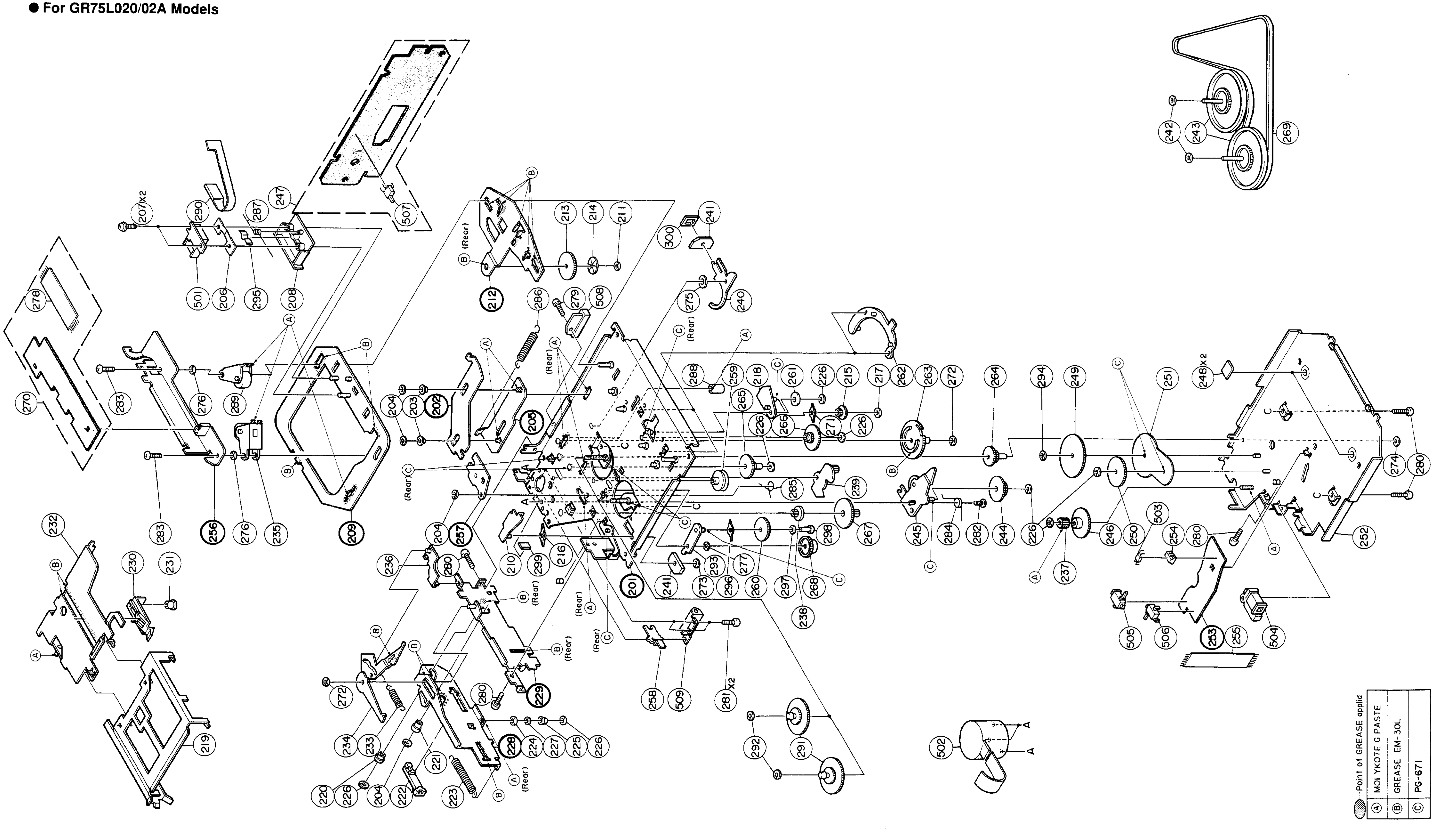
Symbol No.		IN-dex	Part No.	Description
	246	3-F	44A10145W01	Gear, Eject
	247	2-B	01V11500W18	Assy., GR Control P.C. Board
	248	3-G	43A41656W01	Spacer, UHMW
	249	3-F	44A11063W01	Gear, Bottom A
	250	3-F	44A11064W01	Gear, Bottom B
	251	3-G	34A11122W02	Washer, GR
	252	3-H	01A10210W02	Assy., Riv. Cover Bottom
	254	3-G	15B11065W01	Guide, Photo
	255	4-G	30T15126W01	Wire, PC Sensor(7P)
	258	4-D	45A10101W01	Lever, Eject Sol
	259	3-D	49A10131W01	Pulley, Idler
	260	4-E	44A10133W01	Gear, Take Up
	261	3-E	44A10134W01	Gear, Sun
	262	3-E	44B10135W01	Gear, Fix
	263	3-E	44B30484W01	Gear, Pause
	264	3-F	44A10137W01	Gear, Pause Idler A
	265	3-D	44A10379W01	Gear, Pause Idler B
	266	3-E	44A10138W01	Gear, Reverse Idler
	267	3-E	44A10139W01	Gear, Motor Idler
	268	4-E	44A11062W01	Gear, Reel Idler
	269	1-G	42A10380W01	Belt, GR
●	270	3-A	01V14700W68	Assy., GR Audio P.C. Board
■	270	3-A	01V11500W19	Assy., GR Audio P.C. Board
▲	270	3-A	01V11500W19	Assy., GR Audio P.C. Board
	271	3-E	41A30475W01	Spring, Clutch
	272		04B41345P15	Washer, Lock(M1.2)
	273	4-D	04B41345P02	Washer, Lock(M1.7)
	274	3-H	04B41345P17	Washer, Lock(M1)
	275	2-D	04B41345P30	Washer, Lock(M3.1)
	276		04B41345P32	Washer, Lock(M3.1)
	277	4-E	04B41345P37	Washer, Lock(M2.1)
	278	2-A	30T15126W02	Wire, PC Joint 7P
	279	2-D	03S44205G78	Screw, Pan(M2x6)
	280		03S44205G30	Screw, Pan(M2.6x4)
	281	4-D	03S72235F53	Screw, Pan(M2x3.3)
	282	3-F	03A12132W02	Screw, Eject Clutch (M2x2.3)
	283		03S43997P64	Screw, Pan(M1.7x3)
	284	3-F	41A10384W01	Spring, Eject Clutch
	285	3-E	41A10385W01	Spring, Cas Push
	286	2-C	41B10386W02	Spring, Sub Head

Symbol No.		IN-dex	Part No.	Description
	287	2-B	41A10387W01	Spring, Pinch Roller
	288	3-D	43A12719W01	Roller, Pause
	289	3-B	01B30863W01	Assy., Pinch Roller
	290	2-B	84T25151W01	Head P.C. Board
	291	4-E	01T35403W01	Assy., Reel
	292	4-E	04B41345P12	Washer, Lock(M1.7)
	293	4-D	01A30161W01	Assy., Riv Lever Take Up
	294	3-F	04B41345P34	Washer Lock(M1.2)
	296	4-D	41A40910W01	Spring, Clutch
	297	4-E	43A41543W01	Washer, Som(M1.2)
	298	3-E	47A41458W01	Pin, Take Up
	299	4-C	43A40388W01	Spacer, Polyslider
	300	2-D	43A41744W01	Lock, Solenoid
Miscellaneous				
●	501	2-B	88T15971W01	Head
■	501	2-B	88T10373W01	Head
▲	501	2-B	88T10373W01	Head
	502	4-E	01V11500W64	Assy., Motor(Main, 13.2V-80mA)
	503	3-G	51T15144W01	Sensor, Photo
	504	4-G	01T10371W01	R/F Sol. Assy.
	505	4-F	40T15382W01	SW., Detector (Pack Down)
	506	4-G	40T15382W01	SW., Detector(Metal)
	507	2-C	40T15222W01	SW., Detector (Pack In)
	508	2-D	01T15249W01	Assy., Play Solenoid
	509	4-D	01T10369W02	Assy., Eject Solenoid

Notes:● ; For GR75E020 model only ■ ; For GR75E010 model only
▲ ; For GR75E01A model only Others ; Common

Exploded View (GR75L Series) (2/4)

- **For GR75L020/02A Models**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(Rear)
A
B
C

▨	...Point of GREASE applid
Ⓐ	MOLYKOTE G PASTE
Ⓑ	GREASE EM-30L
Ⓒ	PG-671

Cassette Deck Assembly Parts List (GR75E Series) (2/4)

Note : The parts without parts list are not supplied.

	Symbol No.	IN-dex	Part No.	Description
	203	3-C	43A11072W01	Roll, Sub Head
	204		04B41345P01	Washer, Lock(M1.2)
	206	2-B	41A31756W01	Spring, Head
	207	2-B	03S40019G03	Screw, F-Locks(M2x4)
	208	2-B	43B12545W01	Tape, Guide
	210	4-C	01A10206W01	Assy., Riv Lever R/F Sol.
	211	2-D	04B41345P29	Washer, Lock(M2.6)
	213	2-D	44A10295W01	Gear, Sensor
	214	2-D	14A10681W01	Reflector
	215	3-E	44A30480W01	Gear, Planet
	216	3-E	41A10097W02	Spring, Clutch
	217	3-E	04B41345P35	Washer, Lock(M1.7)
	218	3-E	01A30824W01	Assy., Riv Lever Reverse
	219	4-B	07B40283W01	Holder, Cassette
	220	5-B	43A12583W01	Roller, Eject
	221	5-C	43A63281F01	Roller, Plate Base
	222	5-C	44A82206F01	Rack
	223	5-C	41B10386W03	Spring, GR(Rack)
	224	4-C	43A10121W01	Roller, Eject(A)
	225	4-D	43A10360W01	Roller, Eject(B)
	226		04B41345P11	Washer, Lock(M1.2)
	227	4-D	43A12377W01	Roller, Eject(C)
	230	4-A	45B10376W01	Slider
	231	4-B	47A63278F01	Shaft, Slider
	232	4-A	01A10212W01	Assy., Riv Plate Base
	233	4-C	41B10386W01	Spring, Eject Arm
	234	4-B	01A21754W01	Assy., Riv Eject Arm(A)
	235	3-B	01B30863W02	Assy., Pinch Roller
	236	4-C	45A10087W01	Lever, Pack In SW.
	237	4-F	44A20314W01	Pinion, Eject
	238	4-E	44A13617W01	Gear, Motor Idler(B)
	239	3-E	01A10201W02	Assy., Riv Lever Pause
	240	2-E	45A40725W01	Lever, Play Sol
	241		76T10374W01	Chip
	242	1-G	04S40075G05	Washer, Polyslider (M2.1)
	243	1-G	01A10368W01	Assy., Flywheel
	244	3-F	44A10141W01	Gear, Eject Idler
	245	3-E	01A10205W02	Assy., Riv Lever Clutch(A)
	246	3-F	44A10145W01	Gear, Eject
	247	2-B	01V23700W03	Assy., GR Control P.C. Board
	248	3-G	43A41656W01	Spacer, UHMW
	249	3-F	44A11063W01	Gear, Bottom(A)
	250	3-F	44A11064W01	Gear, Bottom(B)
	251	3-G	34A11122W02	Washer, GR
	252	3-H	01A10210W02	Assy., Riv. Cover Bottom
	254	3-G	15B11065W01	Guide, Photo
	255	4-G	30T15126W01	Wire, PC Sensor(7P)
	258	4-D	45A10101W01	Lever, Eject Sol.
	259	3-D	49A10131W01	Pulley, Idler
	260	4-E	44A10133W01	Gear, Take Up
	261	3-E	44A10134W01	Gear, Sun
	262	3-E	44B10135W01	Gear, Fix
	263	3-E	44B21670W01	Gear, Pause
	264	3-F	44A10137W01	Gear, Pause Idler(A)
	265	3-D	44A10379W01	Gear, Pause Idler(B)
	266	3-E	44A10138W01	Gear, Reverse Idler
	267	3-E	44A10139W01	Gear, Motor Idler
	268	4-E	44A11062W01	Gear, Reel Idler
	269	1-G	42A10380W01	Belt, GR
	270	3-A	01V14700W68	Assy., GR Audio P.C. Board
	271	3-E	41A30475W01	Spring, Clutch
	272	3-F	04B41345P15	Washer, Lock(M1.2)
	273	4-D	04B41345P02	Washer, Lock(M1.7)
	274	3-H	04B41345P17	Washer, Lock(M1)
	275	2-D	04B41345P30	Washer, Lock(M3.1)
	276		04B41345P32	Washer, Lock(M3.1)
	277	4-E	04B41345P37	Washer, Lock(M2.1)
	278	2-A	30T15126W02	Wire, PC Joint 7P
	279	2-D	03S44205G78	Screw, Pan(M2x6)
	280		03S44205G30	Screw, Pan(M2.6x4)
	281	4-D	03S72235F53	Screw, Pan(M2x3.3)
	282	3-F	03A12132W02	Screw, Eject Clutch (M2x2.3)
	283		03S43997P64	Screw, Pan(M1.7x3)
	284	3-F	41A10384W01	Spring, Eject Clutch
	285	3-E	41A10385W01	Spring, Cas. Push
	286	2-C	41B10386W02	Spring, Sub Head
	287	2-B	41A10387W01	Spring, Pinch Roller
	288	3-D	43A12719W01	Roller, Pause
	289	3-B	01B30863W01	Assy., Pinch Roller
	290	2-B	84T25151W01	Head P.C. Board

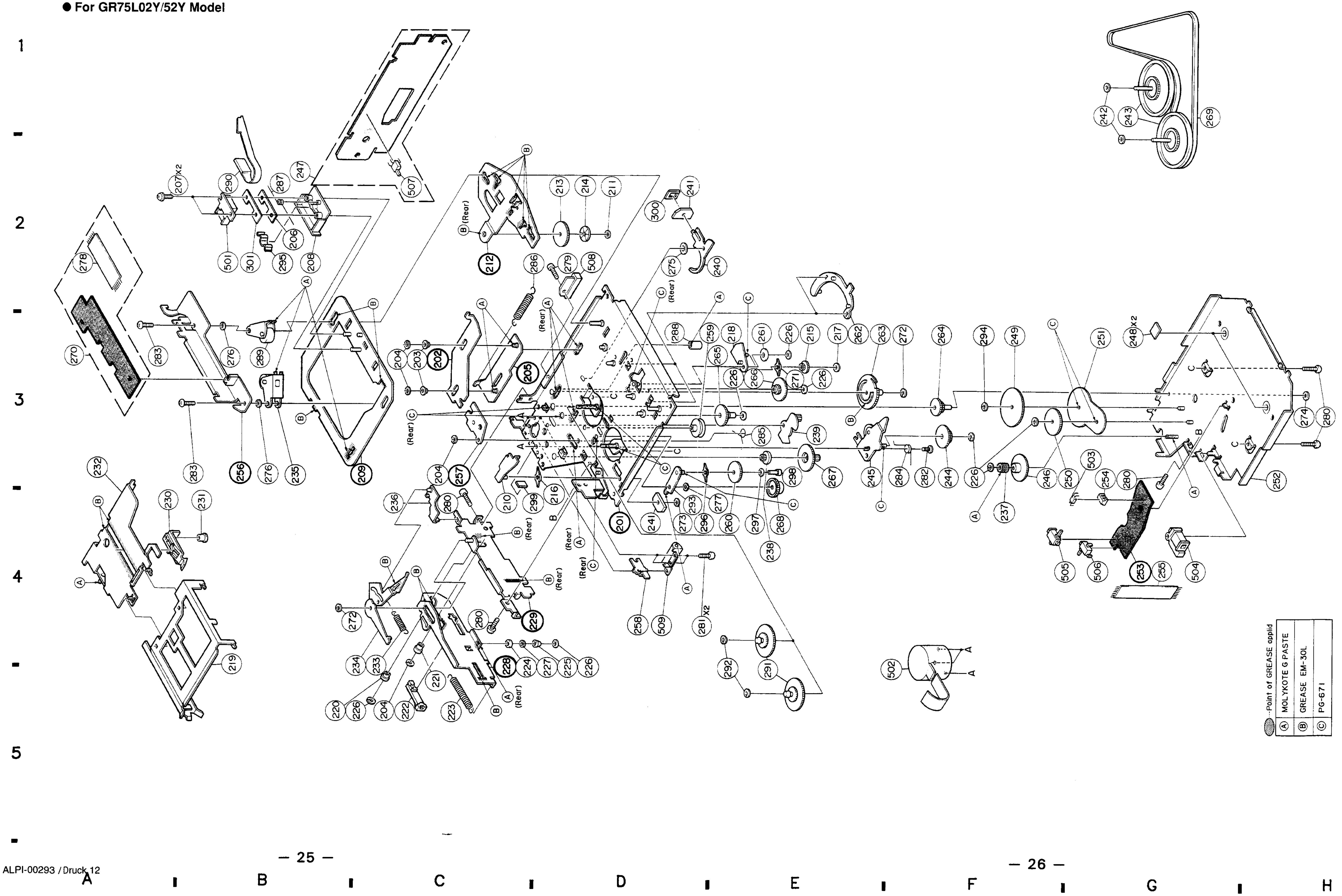
Notes : ◆ ; For GR75L020 model only ○ ; For GR75L02A model only
Others ; Common

	Symbol No.	IN-dex	Part No.	Description
	291	4-E	01T35403W02	Assy., Reel
	292	4-E	04B41345P12	Washer, Lock(M1.7)
	293	4-D	01A30161W01	Assy., Riv Lever Take Up
	294	3-F	04B41345P34	Washer, Lock(M1.2)
	295	2-B	26A20537W01	Shield, Plate
	296	4-D	41A40910W01	Spring, Clutch
	297	4-E	43A41543W01	Washer, Som(M1.2)
	298	3-E	47A41458W01	Pin, Take Up
	299	3-D	43A40388W01	Spacer, Polyslider
	300	2-D	43A41744W01	Lock, Solenoid
				Miscellaneous
	501	2-B	88T15971W01	Head
◆	502	4-E	01V23900W60	Assy., Motor(13.2V-105mA)
○	502	4-E	01V43400W37	Assy., Motor(13.2V-88mA)
	503	3-G	51T15144W01	Sensor, Photo
	504	4-G	01T10371W01	R/F Sol. Assy
	505	4-F	40T15382W01	SW., Detector (Pack Down)
	506	4-G	40T15382W01	SW., Detector (Metal)
	507	2-C	40T15222W01	SW., Detector (Pack In)
	508	2-D	01T15249W01	Assy., Play Solenoid
	509	4-D	01T10369W02	Assy., Eject Solenoid

Notes : ◆ ; For GR75L020 model only ○ ; For GR75L02A model only
Others ; Common

Exploded View (GR-Y Series) (3/4)

● **For GR75L02Y/52Y Model**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▨	···Point of GREASE applid
Ⓐ	MOLYKOTE G PASTE
Ⓑ	GREASE EM-30L
Ⓒ	PG-671

Cassette Deck Assembly Parts List (GR-Y Series) (3/4)

Note : The parts without parts list are not supplied.

Symbol No.	IN-dex	Part No.	Description
203	3-C	43A11072W01	Roll. Sub Head
204		04B41345P01	Washer. Lock(M1.2)
206	2-B	41A31756W01	Spring. Head
207	2-B	03S40019G03	Screw. F-Locks(M2x4)
208	2-B	43B12545W01	Tape. Guide
210	4-C	01A10206W01	Assy.. Riv Lever R/F Sol.
211	2-D	04B41345P29	Washer. Lock(M2.6)
213	2-D	44A10295W01	Gear. Sensor
214	2-D	14A10681W01	Reflector
215	3-E	44A30480W01	Gear. Planet
216		41A10097W02	Spring. Clutch
217	3-E	04B41345P35	Washer. Lock(M1.7)
218	3-E	01A30824W01	Assy.. Riv Lever Reverse
219	4-B	07B40283W01	Holder. Cassette
220	5-B	43A12583W01	Roller. Eject
221	5-C	43A63281F01	Roller. Plate Base
222	5-C	44A82206F01	Rack
223	5-C	41B10386W03	Spring. GR(Rack)
224	4-C	43A10121W01	Roller. Eject(A)
225	4-D	43A10360W01	Roller. Eject(B)
226		04B41345P11	Washer. Lock(M1.2)
227	4-D	43A12377W01	Roller. Eject(C)
230	4-A	45B10376W01	Slider
231	4-B	47A63278F01	Shaft. Slider
232	4-A	01A10212W01	Assy.. Riv Plate Base
233	4-C	41B10386W01	Spring. Eject Arm
234	4-B	01A21754W01	Assy.. Riv Eject Arm(A)
235	3-B	01B30863W02	Assy.. Pinch Roller
236	4-C	45A10087W01	Lever. Pack In SW.
237	4-F	44A20314W01	Pinion. Eject
238	4-E	44A13617W01	Gear. Motor Idler(B)
239	3-E	01A10201W02	Assy.. Riv Lever Pause
240	2-D	45A40725W01	Lever. Play Sol.
241		76T10374W01	Chip
242	1-G	04S40075G05	Washer. Polyslider (M2.1)
243	1-G	01A10368W01	Assy.. Flywheel
244	3-F	44A10141W01	Gear. Eject Idler
245	3-E	01A10205W02	Assy.. Riv Lever Clutch(A)
246	3-F	44A10145W01	Gear. Eject
☆ 247	2-B	01V23700W03	Assy.. GR Control P.C. Board
◇ 247		01V44200W74	Assy.. GR Control P.C. Board
248	3-G	43A41656W01	Spacer. UHMW
249	3-F	44A11063W01	Gear. Bottom(A)
250	3-F	44A11064W01	Gear. Bottom(B)
251	3-G	34A11122W02	Washer. GR
252	3-H	01A10210W02	Assy.. Riv. Cover Bottom
254	3-G	15B11065W01	Guide. Photo
255	4-G	30T15126W01	Wire. PC Sensor(7P)
258	4-D	45A10101W01	Lever. Eject Sol.
259	3-D	49A10131W01	Pulley. Idler
260	4-E	44A10133W01	Gear. Take Up
261	3-E	44A10134W01	Gear. Sun
262	3-E	44B10135W01	Gear. Fix
263	3-E	44B21670W01	Gear. Pause
264	3-F	44A10137W01	Gear. Pause Idler(A)
265	3-D	44A10379W01	Gear. Pause Idler(B)
266	3-E	44A10138W01	Gear. Reverse Idler
267	3-E	44A10139W01	Gear. Motor Idler
268	4-E	44A11062W01	Gear. Reel Idler
269	1-G	42A10380W01	Belt. GR
270	3-A	01V33300W03	Assy.. GR Audio P.C. Board
271	3-E	41A30475W01	Spring. Clutch
272	3-F	04B41345P15	Washer. Lock(M1.2)
273		04B41345P02	Washer. Lock(M1.7)
274	3-H	04B41345P17	Washer. Lock(M1)
275	2-D	04B41345P30	Washer. Lock(M3.1)
276	3-B	04B41345P32	Washer. Lock(M3.1)
277	4-E	04B41345P37	Washer. Lock(M2.1)
278	2-A	30T15126W02	Wire. PC Joint 7P
279	2-D	03S44205G78	Screw. Pan(M2x6)
280		03S44205G30	Screw. Pan(M2.6x4)
281	4-D	03S72235F53	Screw. Pan(M2x3.3)
282	3-F	03A12132W02	Screw. Eject Clutch (M2x2.3)
283		03S43997P64	Screw. Pan(M1.7x3)
284	3-F	41A10384W01	Spring. Eject Clutch
285	3-E	41A10385W01	Spring. Cas. Push
286	2-C	41B10386W02	Spring. Sub Head
287	2-B	41A10387W01	Spring. Pinch Roller
288	3-D	43A12719W01	Roller. Pause
289	3-B	01B30863W01	Assy.. Pinch Roller
290	2-B	84T35271W01	Head P.C. Board

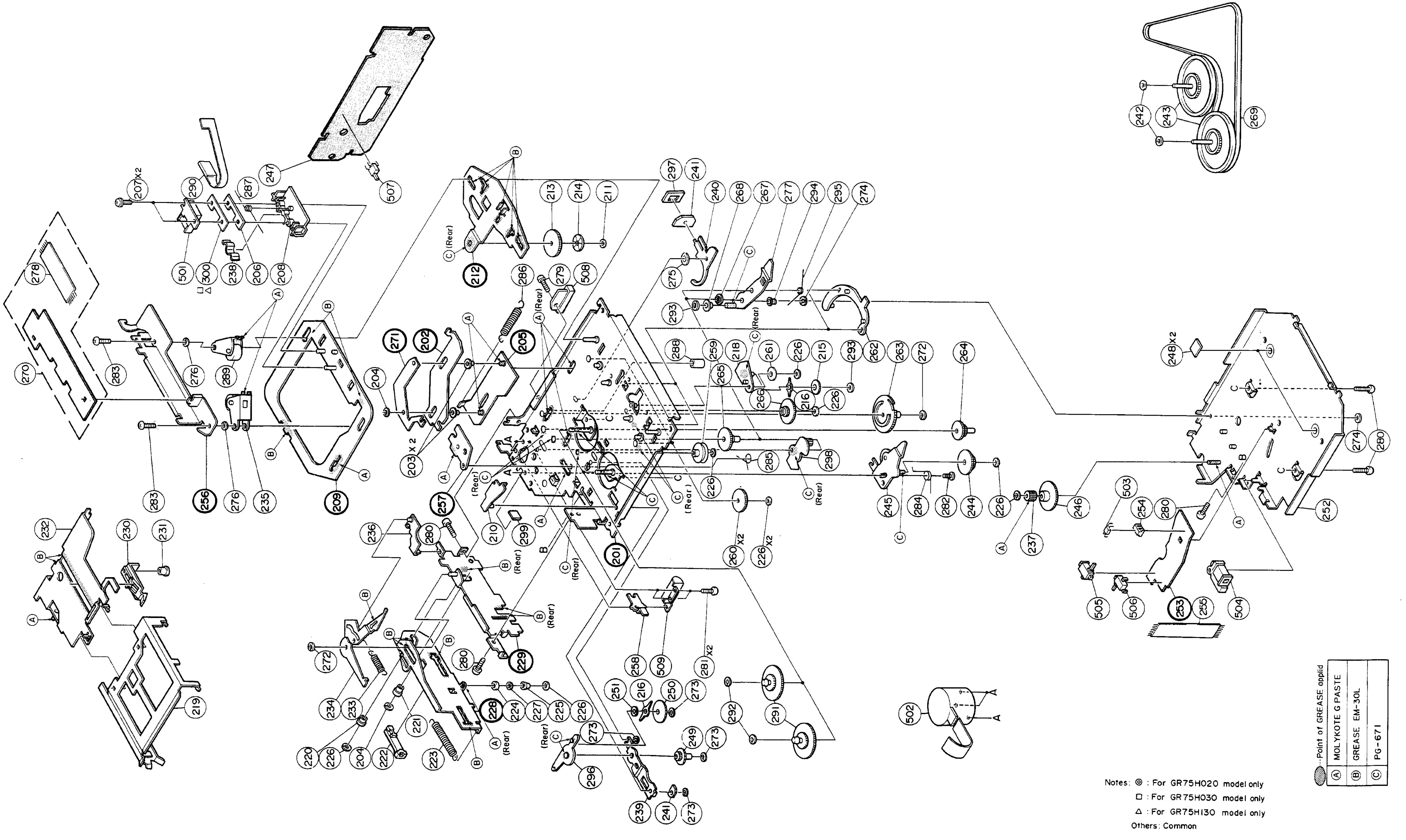
Notes:☆ ; For GR75L02Y model only ◇ ; For GR75L52Y model only
Others ; Common

Symbol No.	IN-dex	Part No.	Description
291	4-E	01T35403W02	Assy.. Reel
292	4-E	04B41345P12	Washer. Lock(M1.7)
293	4-D	01A30161W01	Assy.. Riv Lever Take Up
294	3-F	04B41345P34	Washer. Lock(M1.2)
295	2-B	26A20537W01	Shield. Plate
296	4-D	41A40910W01	Spring. Clutch
297	4-E	43A41543W01	Washer. Som(M1.2)
298	3-E	47A41458W01	Pin. Take Up
299	3-C	43A40388W01	Spacer. Polyslider
300	2-D	43A41744W01	Lock. Solenoid
301	2-B	41A41416W01	Spring. Head
Miscellaneous			
501	2-B	88T15971W01	Head
☆ 502	4-E	01V23900W60	Assy.. Motor(13.2V-105mA)
◇ 502	4-E	01V44200W73	Assy.. Motor(13.2V-80mA)
503	3-G	51T15144W01	Sensor. Photo
504	4-G	01T10371W01	R/F Sol. Assy
505	4-F	40T15382W01	SW.. Detector (Pack Down)
506	4-G	40T15382W01	SW.. Detector (Metal)
507	2-C	40T15222W01	SW.. Detector (Pack In)
508	2-D	01T15249W01	Assy.. Play Solenoid
509	4-D	01T10369W02	Assy.. Eject Solenoid

Notes:☆ ; For GR75L02Y model only ◇ ; For GR75L52Y model only
Others ; Common

Exploded View (GR75H Series) (4/4)

- **For GR75H030/020/130 Model**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Notes: ◎ : For GR75H020 model only
□ : For GR75H030 model only
△ : For GR75H130 model only
Others: Common

▨ ...Point of GREASE applid
Ⓐ MOLYKOTE G PASTE
Ⓑ GREASE EM-30L
Ⓒ PG-671

Cassette Deck Assembly Parts List (GR75H Series) (4/4)

Note : The parts without parts list are not supplied.

Symbol No.		IN-dex	Part No.	Description
	203	3-C	43A31453W01	Roller, Sub Head
	204		04B41345P01	Washer, Lock(M1.2)
	206	2-B	41A31756W01	Spring, Head
	207	2-A	03A38021W01	Screw, Flange(M2x4)
	208	2-B	43B12545W01	Tape, Guide
	210	4-C	01A30462W01	Assy., Riv Lever R/F Sol
	211	2-D	04B41345P29	Washer, Lock(M2.6)
	213	2-D	44A10295W01	Gear, Sensor
	214	2-D	14A10681W01	Reflector
	215	3-E	44A30480W01	Gear, Planet
	216		41A30475W01	Spring, Clutch
	218	3-E	01A30824W01	Assy., Riv Lever Reverse
◎	219	4-B	07B40283W01	Holder, Cassette
□	219	4-B	07B40283W01	Holder, Cassette
△	219	4-B	07B40012W01	Holder, Cassette
	220	5-B	43A12583W01	Roller, Eject
	221	5-C	43A63281F01	Roller, Plate Base
	222	5-C	44A82206F01	Rack
◎	223	5-C	41B10386W03	Spring, GR(Rack)
□	223	5-C	41B10386W03	Spring, GR(Rack)
△	223	5-C	41B10386W04	Spring, GR(Rack)
	224	5-C	43A10121W01	Roller, Eject A
	225	5-D	43A10360W01	Roller, Eject B
	226		04B41345P11	Washer, Lock(M1.2)
	227	5-D	43A12377W01	Roller, Eject C
	230	4-A	45B10376W01	Slider
	231	4-B	47A63278F01	Shaft, Slider
◎	232	4-A	01A10212W01	Assy., Riv Plate Base
□	232	4-A	01A10212W01	Assy., Riv Plate Base
△	232	4-A	01A40024W01	Assy., Riv Plate Base
◎	233	5-C	41B10386W01	Spring, Eject Arm
□	233	5-C	41B10386W01	Spring, Eject Arm
△	233	5-C	41B63283F11	Spring
◎	234	5-C	01A30883W01	Assy., Riv Eject Arm B
□	234	5-C	01A30883W01	Assy., Riv Eject Arm B
△	234	5-C	01A40021W01	Assy., Riv Eject Arm D
	235	3-B	01B30863W02	Assy., Pinch Roller
	236	4-C	45A10087W01	Lever Pack In SW
	237	4-F	44A20314W01	Pinion, Eject
	238	2-B	26A20537W01	Shield, plate
	239	5-D	01A40881W01	Assy., Riv RF Link
	240	2-D	45A40725W01	Lever, Play Sol.
	241		76T10374W01	Chip
	242	1-G	04S40075G05	Washer, Polyslider(M2.1)
	243	1-G	01A30488W01	Assy., Flywheel
	244	3-F	44A10141W01	Gear, Eject Idler
	245	3-E	01A10205W02	Assy., Riv Lever Clutch A
	246	3-F	44A10145W01	Gear, Eject
	247	2-B	01V33500W45	Assy., GR Control P.C. Board
	248	3-G	43A41656W01	Spacer, UHMW
	249	5-D	44A30481W01	Gear, RF Idler
	250	4-D	44A30483W01	Gear, RF
	251	4-D	04S40075G58	Washer, Polyslider(M2.1)
	252	3-H	01A30463W01	Assy., Riv. Cover Bottom
	254	3-G	15B11065W01	Guide, Photo
	255	4-G	30T15126W01	Wire, PC Sensor(7P)
	258	4-D	45A10101W01	Lever, Eject Sol
	259	3-D	49A30476W01	Pulley, Idler
	260	4-E	44A30482W01	Gear, Take Up
	261	3-E	44A30478W01	Gear, Sun
	262	3-E	44B10135W01	Gear, Fix
	263	3-E	44B30484W01	Gear, Pause
	264	3-F	44A10137W01	Gear, Pause Idler A
	265	3-E	44A30486W01	Gear, Pause Idler B
	266	3-E	44A30479W01	Gear, Reverse Idler
	267	2-E	44A30485W01	Gear, Motor Idler
	268	2-E	44A30487W01	Gear, Motor Clutch
	269	1-G	42A31850W01	Belt, GR
◎	270	3-A	01V43400W38	Assy., GR Audio P.C. Board
□	270	3-A	01V33300W03	Assy., GR Audio P.C. Board
△	270	3-A	01V33300W03	Assy., GR Audio P.C. Board
	272	3-F	04B41345P15	Washer, Lock(M1.2)
	273		04B41345P02	Washer, Lock(M1.7)
	274	3-H	04B41345P17	Washer, Lock(M1)
	275	2-D	04B41345P30	Washer, Lock(M3.1)
	276	3-B	04B41345P32	Washer, Lock(M3.1)
	277	2-E	01A30464W01	Assy., Riv Play Clutch
	278	2-A	30T15126W02	Wire, PC Joint 7P
	279	2-D	03S44205G78	Screw, Pan(M2x6)
	280		03S44205G30	Screw, Pan(M2.6x4)
	281	4-D	03S72235F53	Screw, Pan(M2x3.3)
	282	3-F	03A12132W02	Screw, Eject Clutch(M2x2.3)
	283		03S43997P64	Screw, Pan(M1.7x3)
	284	3-F	41A10384W01	Spring, Eject Clutch
	285	3-E	41A10385W01	Spring, Cas Push
	286	2-C	41B10386W02	Spring, Sub Head
	287	2-B	41A10387W01	Spring, Pinch Roller
	288	3-D	43A12719W01	Roller, Pause
	289	3-B	01B30863W01	Assy., Pinch Roller
◎	290	2-B	84T25151W01	Head P.C. Board

Notes: ◎ ; For GR75H020 model only □ ; For GR75H030 model only
△ ; For GR75H130 model only Others ; Common

Symbol No.		IN-dex	Part No.	Description
□	290	2-B	84T35271W01	Head P.C. Board
△	290	2-B	84T35271W01	Head P.C. Board
	291	5-E	01T35403W01	Assy., Reel
	292	5-E	04B41345P12	Washer, Lock(M1.7)
	293	2-D	04B41345P35	Washer, Lock(M1.7)
	294	2-E	43A30827W01	Spacer, Motor Idler
	295	2-E	41A30490W01	Spring, Play Clutch
	296	5-D	01A40882W01	Assy., Riv Lever RF
	297	2-D	34A48030W01	Washer, Solenoid
	298	3-E	01A10201W02	Assy, Riv Lever Pause
	299	4-C	43A40388W01	Spacer, Polyslider
□	300	2-B	41A41416W01	Spring, Head
△	300	2-B	41A41416W01	Spring, Head
Miscellaneous				
◎	501	2-B	88T15971W01	Head
□	501	2-B	88T35406W01	Head
△	501	2-B	88T35406W01	Head
	502	5-F	01V41100W72	Assy., Motor(11.5v-85mA)
	503	3-G	51T15144W01	Sensor, Photo
	504	4-G	01T10371W01	R/F Sol. Assy.
	505	4-F	40T15382W01	SW., Detector (Pack Down)
	506	4-G	40T15382W01	SW., Detector(Metal)
	507	2-C	40T15222W01	SW., Detector (Pack In)
	508	2-D	01T15249W01	Assy., Play Solenoid
	509	4-D	01T10369W02	Assy., Eject Solenoid

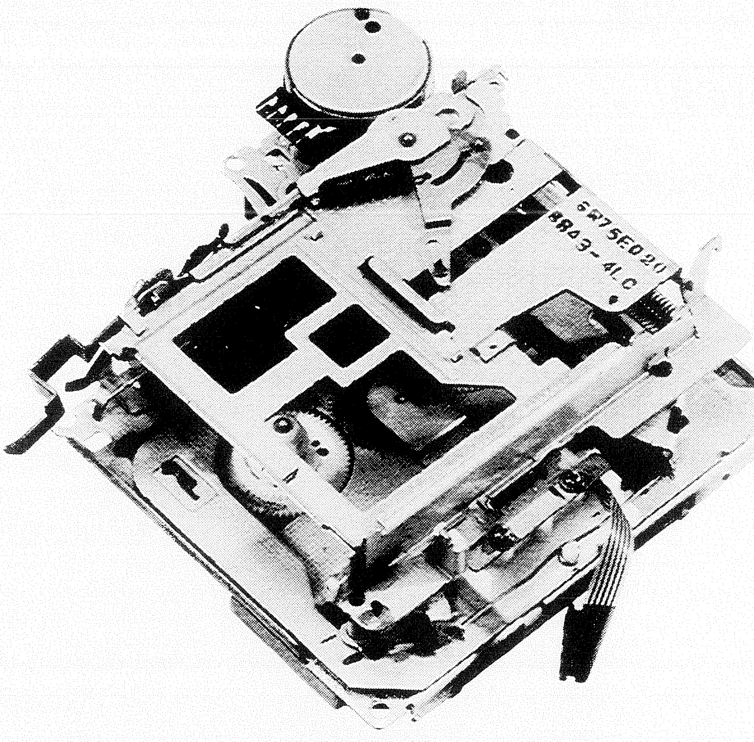
Notes:◎ ; For GR75H020 model only □ ; For GR75H030 model only
△ ; For GR75H130 model only Others ; Common

ALPINE

SERVICE MANUAL

Cassette Deck Mechanism

ADDENDUM & REVISED (III)


6R75E020
8843-41C

GR/GR-Y SERIES

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List of Usable Lock Washers

	SIZE	PARTS NO.	QUANTITY		
			GR75E Series	GR75L Series	GR-Y Series
1	(M1.2 x 3.5 x 0.25)	04B41345P01	8	7	6
2	(M1.7 x 3.5 x 0.25)	04B41345P02	1	1	2
3	(M2.1 x 5 x 0.25)	04B41345P06	1	1	0
4	(M1.2 x 2.5 x 0.25)	04B41345P11	7	7	8
5	(M1.7 x 3.5 x 0.35)	04B41345P12	2	2	2
6	(M1.2 x 3.5 x 0.35)	04B41345P15	1	1	1
7	(M1 x 2.5 x 0.25)	04B41345P17	1	1	1
8	(M2.6 x 5 x 0.25)	04B41345P29	1	1	0
9	(M3.1 x 8 x 0.05)	04B41345P30	1	1	1
10	(M1.7 x 3 x 0.25)	04B41345P31	1	1	1
11	(M3.1 x 5 x 0.35)	04B41345P32	2	2	2
12	(M1.2 x 2.5 x 0.3)	04B41345P34	1	1	0
13	(M2.1 x 4 x 0.25)	04B41345P37	0	0	1
14	(M2.6 x 4.7 x 0.25)	04B41345P38	0	0	1

List of Usable Oil

1) Molykote E paste
2) Grease EM-30L
3) Grease FLOIL 425A

List of Usable Jigs

1) GR bottom gear jig (Part No. 44A20788W01)
2) Head height adjustment gauge
   AI-500 (Part No. AI-500)

Memo

Disassembly, Assembly and Replacement of Functional Parts

1. Disassembly and Assembly of Bottom Cover

(1) Turn the mechanism around as shown in Figure 1.
(2) Remove M1 lock washer ① as shown in Figure 1.
(3) Remove three screws ② as shown in Figure 1.
(4) Lift the bottom cover slowly from the position Ⓐ-1, pull the hooks out of the holes in the chassis, and remove the bottom cover as shown in Figure 1.
(5) When remounting the bottom cover, first turn the front of the mechanism up as shown in Figure 2.
(6) Slide the slider in the direction Ⓐ-2 as shown in Figure 2.
(7) Push down the cassette holder in the direction Ⓐ-3 as shown in Figure 2.
(8) Pull the door pin in the direction Ⓐ-4 so that the mechanism is locked in as shown in Figure 2.
(9) Turn the mechanism around as shown in Figure 3.
(10) Pull the automatic metal lever in the direction Ⓐ-5 and the RF solenoid chip in the direction Ⓐ-6 as shown in Figure 3.
(11) Insert the hooks of the bottom cover into the chassis in the direction Ⓐ-7, and then join the part Ⓐ-8 of the bottom cover to the chassis slowly, making sure that the 3 points indicated with the straight lines in the Figure 3 are fitted properly.
If there are troubles in mounting the bottom cover, do not apply force but remove the bottom cover once again and check the positions of the individual parts. (Refer to Figure 3.)
(12) Since the hooks marked Ⓐ-8 will be lifted slightly as shown in Figure 4, insert the jig through the hole Ⓐ-9, and fix it turning the jig slightly in the direction Ⓐ-11.
Instead of operation (12), turn the gear nose slowly with a precision screwdriver etc., taking care not to damage it.
After 2 to 3 turns, it will click into place.
(Refer to Figures 4 and 5.)
(13) Fix the screws and the lock washer that have been removed.

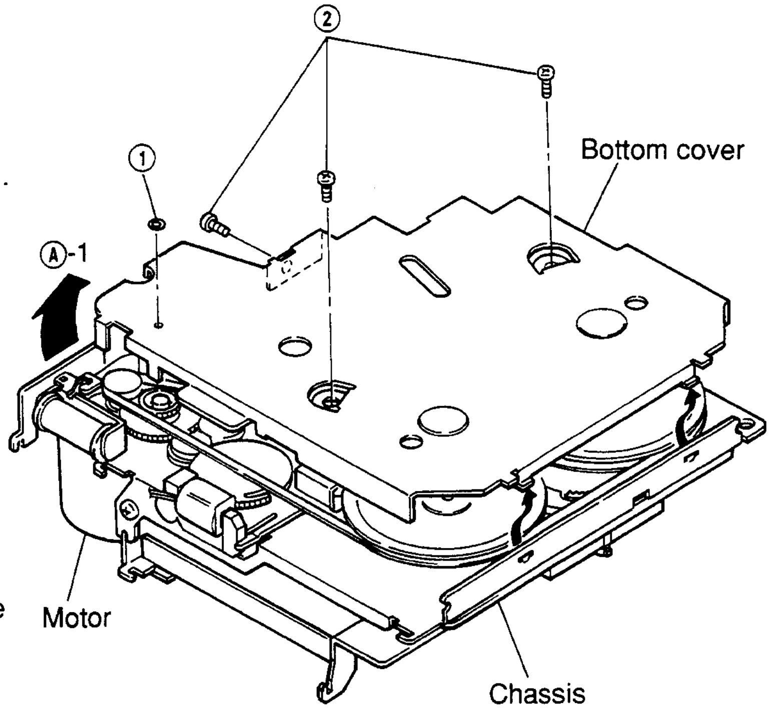


Figure 1

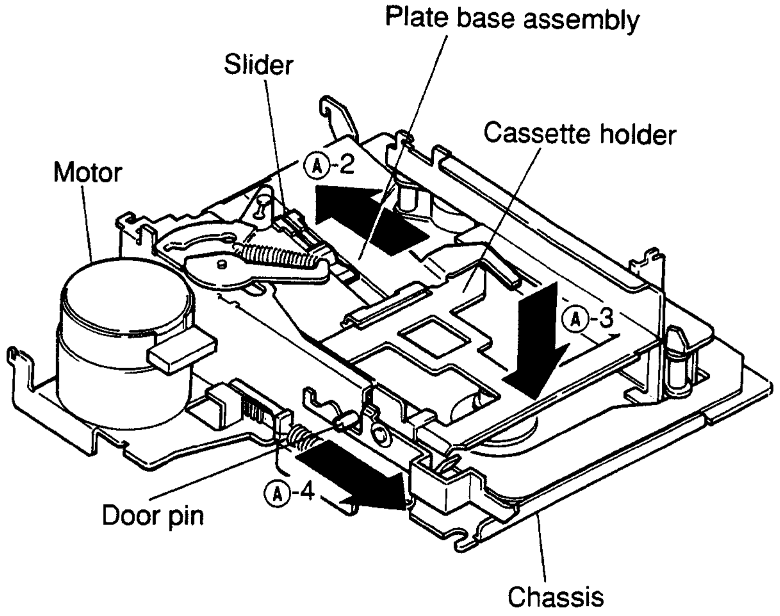


Figure 2

(14) Insert the jig into the hole Ⓐ-9 as shown in Figure and rotate the eject solenoid counterclockwise about 20 times, pulling it in the direction Ⓐ-10 with the finger.
Then the eject operation is completed.
Instead of operation (14), the eject operation can be performed by mounting the mechanism to the product. (Refer to Figures 4 and 5.)

Note: Do not reuse the used lock washers for mounting.
When turning the mechanism, be careful not to drop the gear and the flywheel.
Fasten the three screws with a fastening torque of 6 kg.cm.

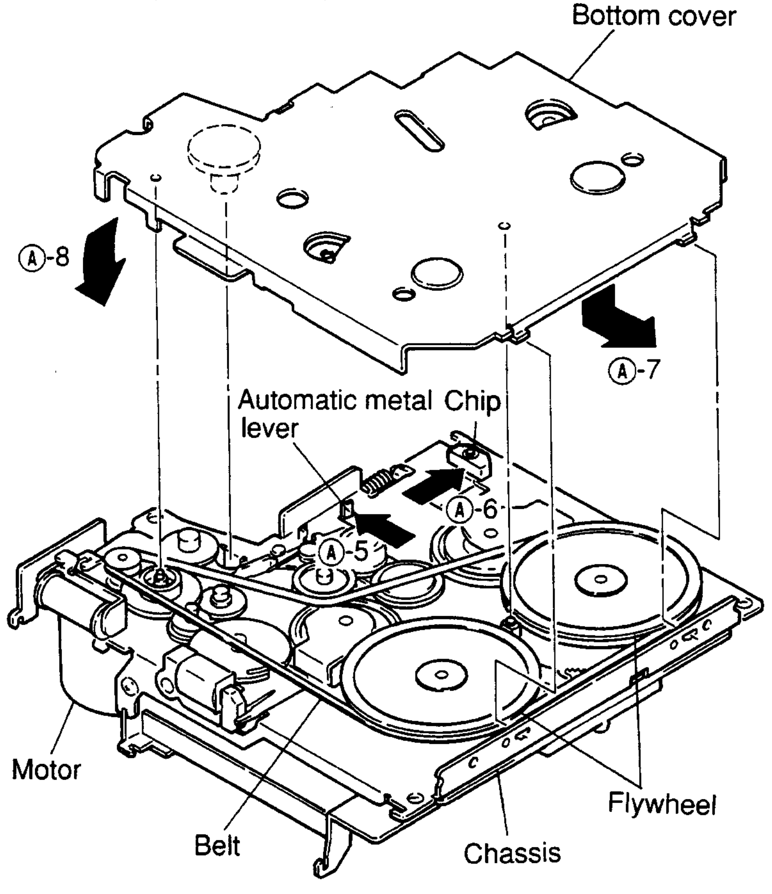


Figure 3

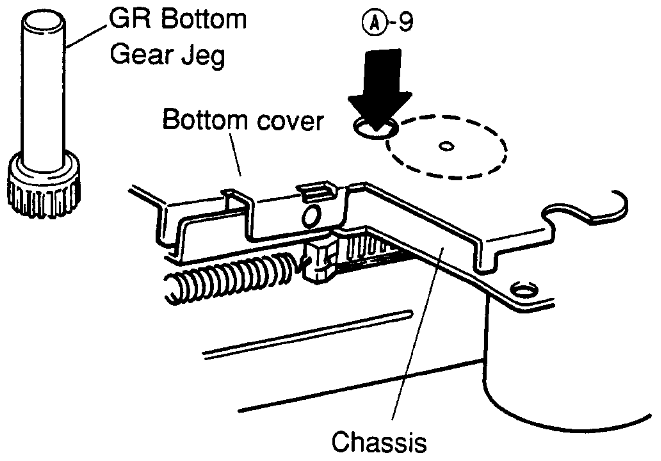


Figure 4

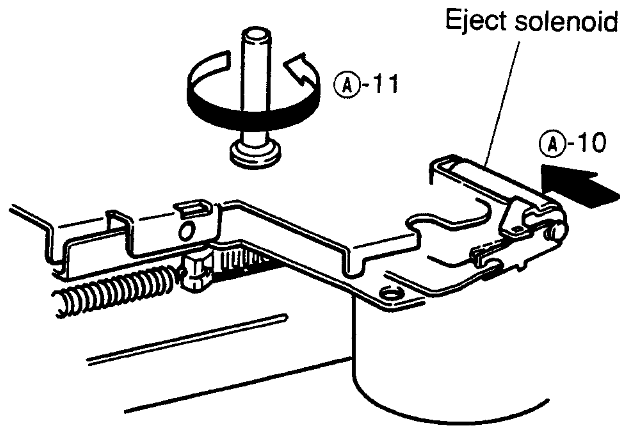


Figure 5

2. Replacement of the bottom cover mounting parts

a. Replacement of the eject gear

(1) Remove M1.2 lock washer ③ as shown in Figure 6.

(2) Pull the eject pinion out of the eject gear and remove the eject gear as shown in Figure 6.

(3) Apply the molykote E paste to the section Ⓑ-1, and mount the eject gear following the removal steps in the reverse order. After replacement is finished, make sure that the gear rotates smoothly. (Refer to Figure 6.)

Note: Do not reuse the used lock washers for remounting.
Take care to avoid damage by piercing and tearing.

b. Replacement of the RF solenoid

(1) Remove two solders ④ and remove the RF solenoid from the bottom cover by pulling it up as shown in Figure 6.

(2) Replace the solenoid with a new one, and remount it following the removal steps in the reverse order as shown in Figure 6.

Note: When removing solder ④, set the temperature of the soldering iron to 350° ± 10° and the soldering time to 1 – 3 seconds. Take care that the solder is not loose, that there is no shortcircuit and that the coating is not damaged.

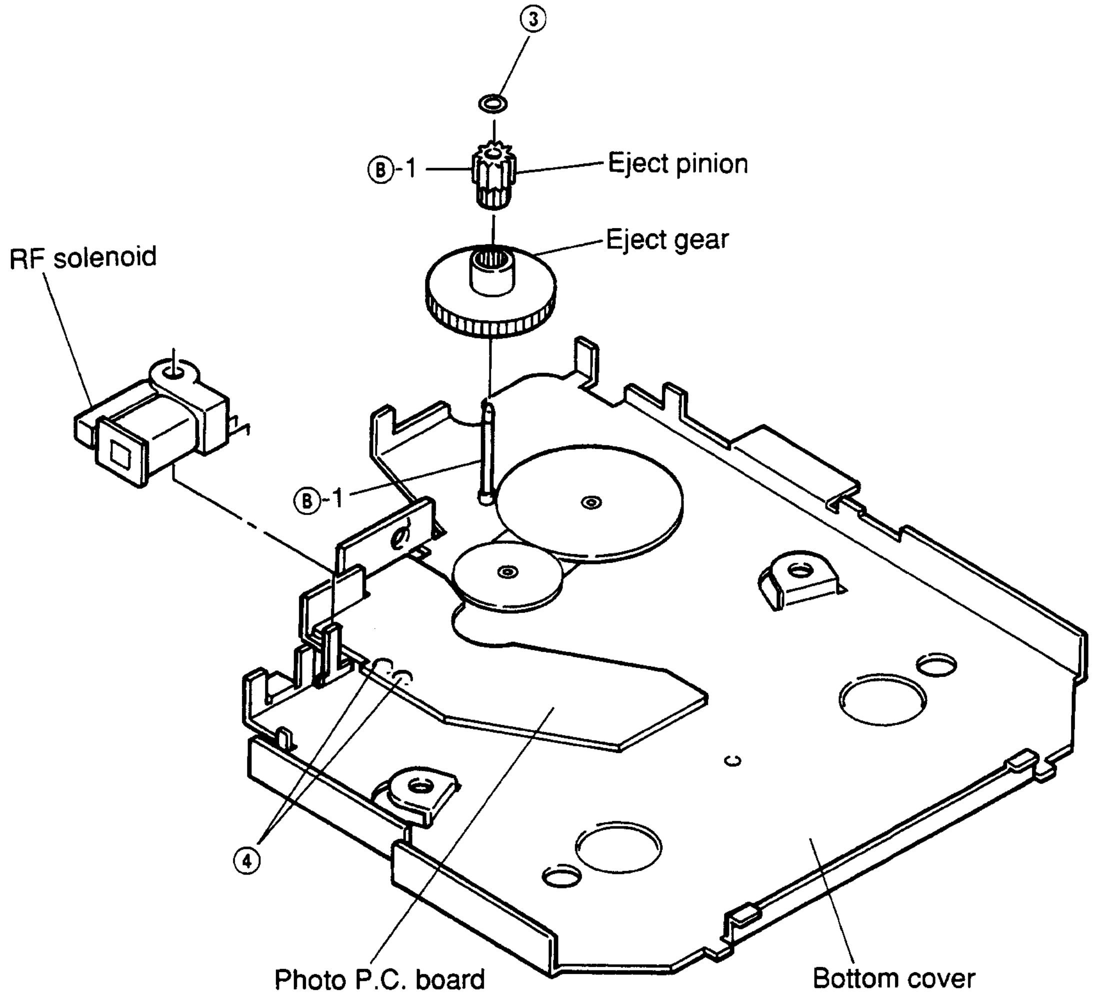


Figure 6

c. Replacement of the photo sensor

(1) Remove four solders ⑤ as shown in Figure 7.

(2) Remove the photo guide together with the photo sensor from the photo P.C. board as shown in Figure 7.

(3) Insert the new photo sensor into the photo guide, and bend the legs of the photo sensor in the direction marked Ⓑ-2 as shown in Figure 7.

(4) Insert the photo guide into the P.C. board and solder the legs so that the photo sensor is set as indicated by ⬚ in Figure 7.

Note: When using the soldering iron, set the temperature of the soldering iron to 350° ± 10° and the soldering time to 1 – 3 seconds. Take care that the solder is not loose, that there is no shortcircuit and that the coating is not damaged. Also take care that the photo guide is properly fixed and straight.

d. Replacement of the detector switch (Automatic metal pack-in)

(1) Remove 4 solders ⑥ with which the switch is fixed as shown in Figure 7.

(2) Prepare the terminals of the switch of the new solder as shown in Figure 8.

(3) After that, insert the switch into the photo P.C. board, and solder the terminals.

Note: When using the soldering iron, refer to Item 2-C to make sure that the temperature of the soldering iron and the soldering time are proper. Also take care that the switch guide is properly fixed and straight.

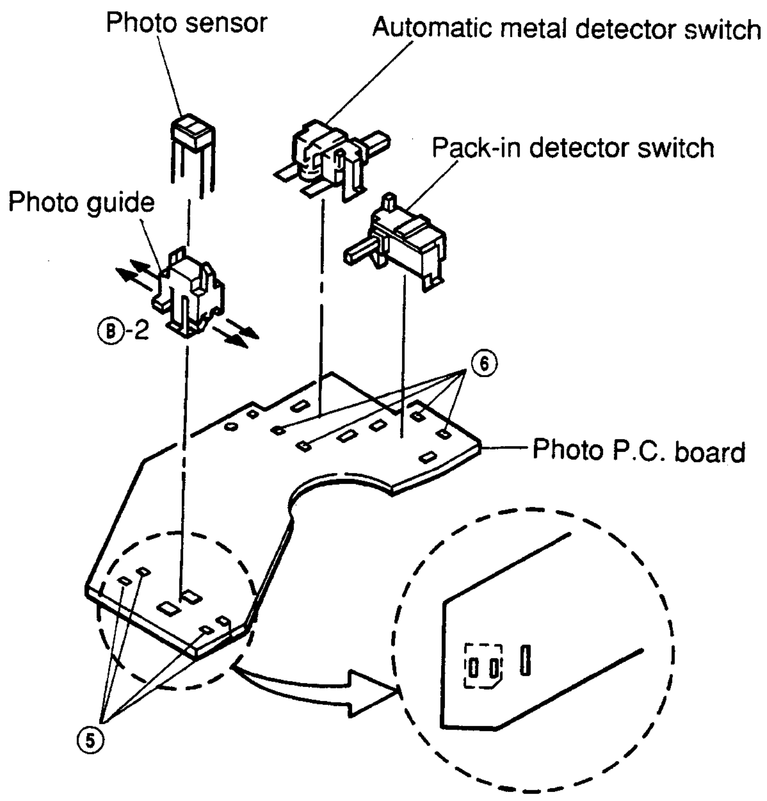


Figure 7

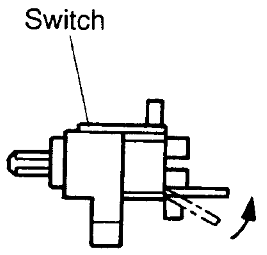


Figure 8

3. Replacement of the mounting parts on the rear of the main chassis

a. Replacement of the belt

(1) After removing the bottom cover, remove the belt.

(2) Clean the new belt with absolute alcohol, and fix it as shown in Figure 9.

Note: When fixing the belt, make sure that it is not twisted or dirty. When removing the belt, do not turn up the front of the chassis.

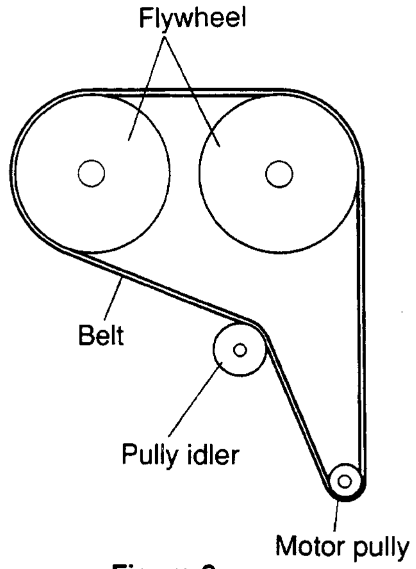

Flywheel
Belt
Pully idler
Motor pully

Figure 9

b. Replacement of the motor

(1) After removing the belt, remove spring ⑦ as shown in Figure 10.

(2) Remove solder ⑧-1, and remove the parallel wire (5P) from the control P.C. board as shown in Figure 11.

(3) Remove two screws ⑨ and ⑩, and remove the motor, taking care not to damage the motor idler gear. (Refer to Figure 10.)

(4) Mount the new motor following the removal steps in the reverse order.

Note: Refer to Item 2-C to make sure that the temperature of the soldering iron and the soldering time are proper. Since the parallel wire is very easily damaged, handle it with care.
Fasten the two screws with a fastening torque of 3 kg.cm.

*When inserting the clutch spring, be careful of the inserting direction as shown in the Figure.

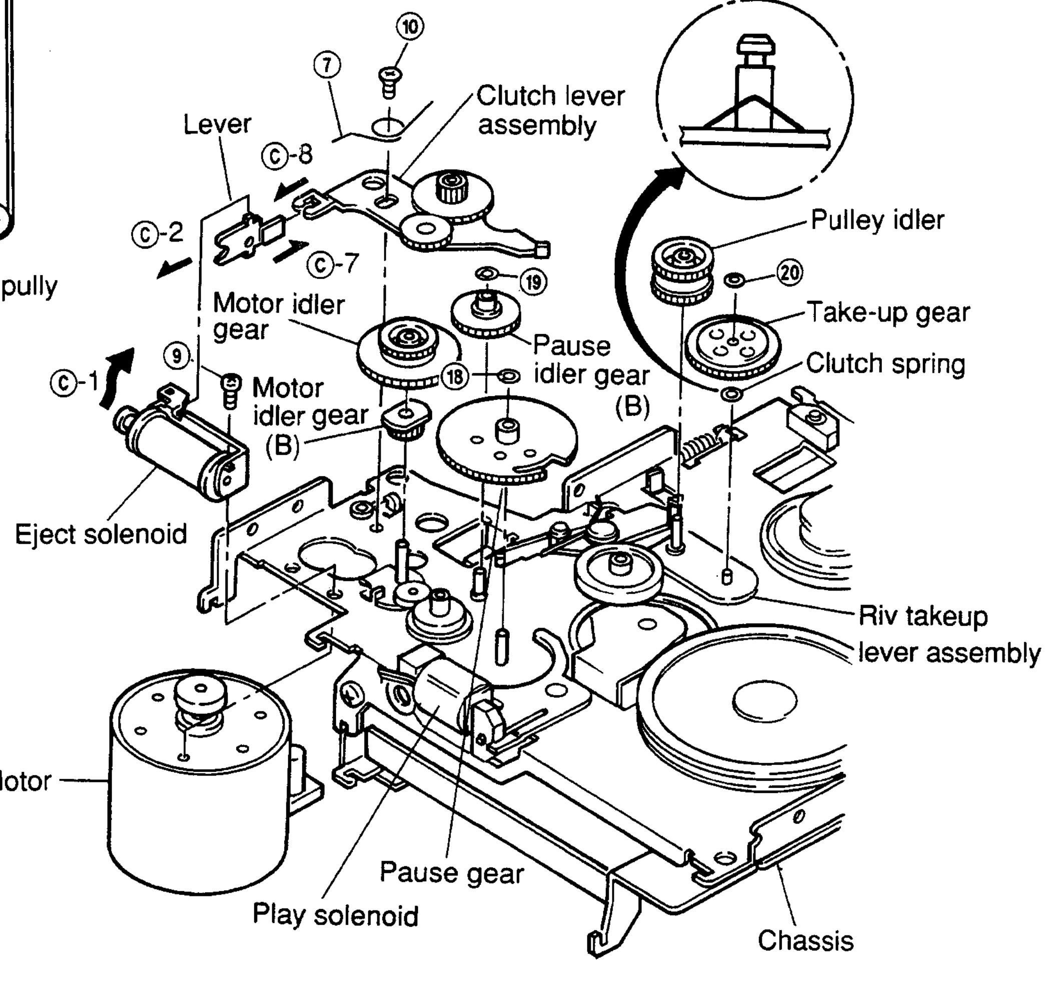

⑩
⑦
Lever
Clutch lever assembly
ⓒ-8
ⓒ-2
ⓒ-7
Pulley idler
⑳
⑲
Take-up gear
Motor idler gear
Pause idler gear (B)
Clutch spring
⑱
ⓒ-1
⑨
Motor idler gear (B)
Eject solenoid
Riv takeup lever assembly
Motor
Pause gear
Play solenoid
Chassis

Figure 10

c. Replacement of the flywheels

(1) After removing the belt, pull out the two flywheels. Take care not to loose the polyslider washer ⑪ located between the flywheel and the chassis. (Refer to Figure 12.)

(2) Fix the polyslider washer to the new flywheel and mount the flywheel to the chassis.

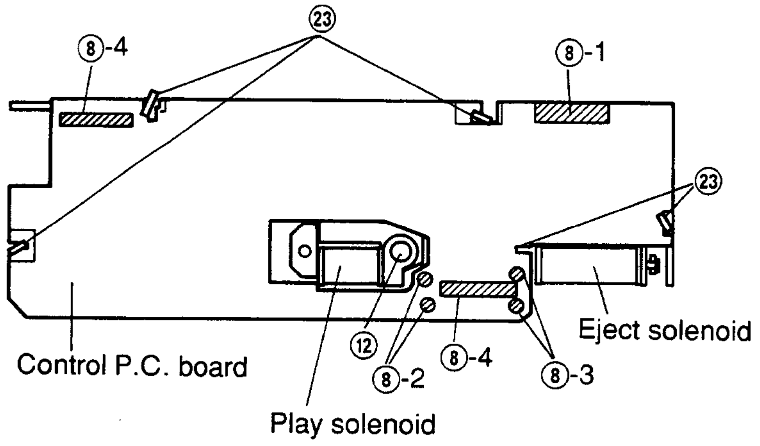
d. Replacement of the play solenoid

(1) Remove the two solders ⑧-2 as shown in Figure 11.

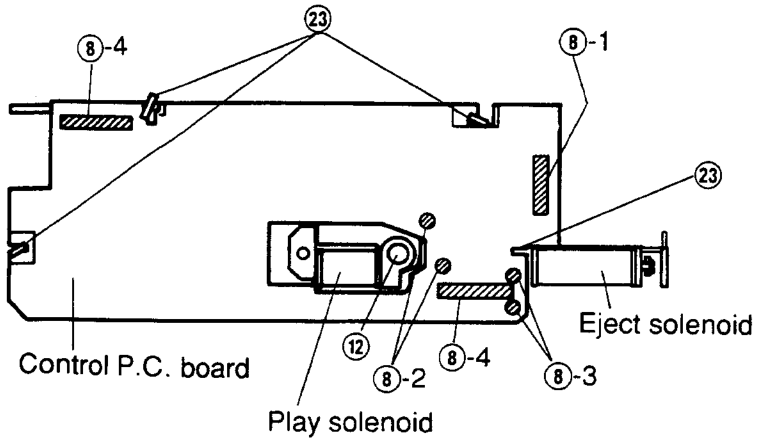
(2) Remove one screw ⑫ and remove the solenoid as shown in Figure 11.

(3) Mount the new solenoid following the removal steps in the reverse order.

Note: Refer to Item 2-C to make sure that the temperature of the soldering iron and the soldering time are proper. Fasten the screws with a fastening torque of 2.3 kg.cm.


㉓
⑧-4
⑧-1
㉓
Control P.C. board
⑫
⑧-2
⑧-4
⑧-3
Eject solenoid
Play solenoid

[For GR75E020, GR75E010, GR75E01A, GR75E01C models]


㉓
⑧-4
⑧-1
㉓
Control P.C. board
⑫
⑧-2
⑧-4
⑧-3
Eject solenoid
Play solenoid

[For GR75L020, GR75L010 models]

Figure 11

e. Replacement of the eject solenoid

(1) Remove two solders ⑧-3. Take care not to loose the tube that protects the wire. (Refer to Figure 11.)

(2) Remove screw ⑨ and remove the play solenoid as shown in Figure 10.

(3) Align position ⓒ-1 of the new solenoid with position ⓒ-2 of the lever and fasten the screw as shown in Figure 10.

(4) Lead the wire through the tube and solder it.

Note: Refer to Item 2-C to make sure that the temperature of the soldering iron and the soldering time are proper. Fasten the screws with a fastening torque of 3 kg.cm.
As the solder wires are not insulated, do not let them cross each other.

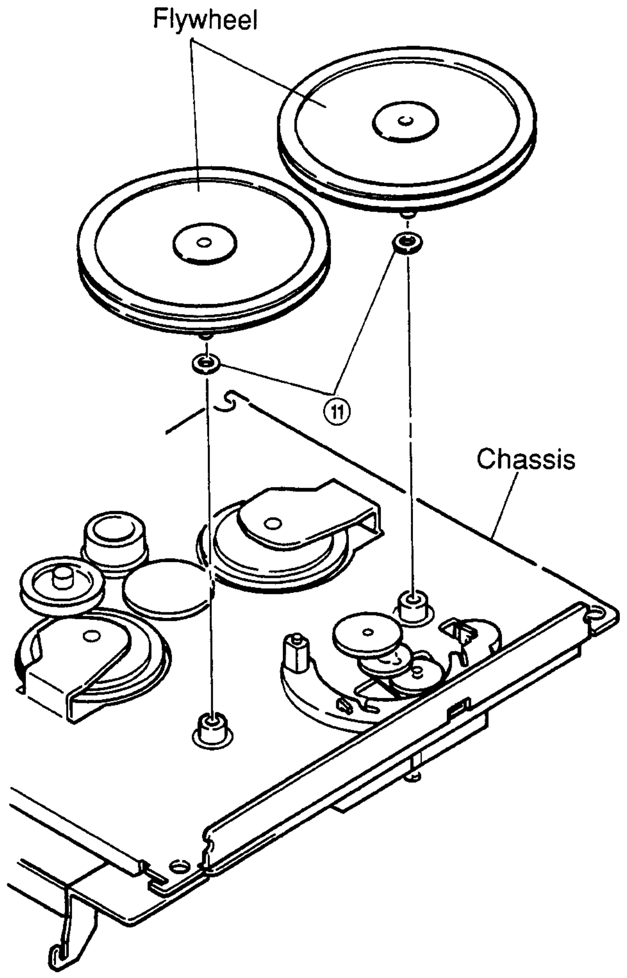

Flywheel
⑪
Chassis

Figure 12

f. Replacement of gears

(f-1) Replacement of the reverse idler gear

(1) Remove M1.2 lock washer ⑬, pull it up from the stud of the chassis and remove the gear as shown in Figure 13.

(2) Remount following the removal steps in the reverse order.

(f-2) Replacement of the sun gear

(1) Remove M1.2 lock washer ⑭, pull it up from the stud of the chassis and remove the gear as shown in Figure 13.

(2) Mount it, following the removal steps in the reverse order.

(f-3) Replacement of the fixing gear

(1) Adjust the two mounting claws for the fix gear on the chassis ⑮ and remove the section ⓒ-3 of the gear by pulling it up in the direction of the arrow shown in Figure 13.

(2) Insert the section ⓒ-4 of the new gear into the chassis, and mount it following the removal steps in the reverse order as shown in Figure 13.

(f-4) Replacement of the reverse lever assembly and planet gear

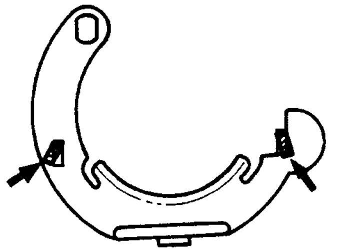
(1) Remove both the fixing gear and the sun gear and remove the reverse lever assembly as shown in Figure 13.

(2) Remove M1.7 lock washer ⑯ and remove the planet gear as shown in Figure 14.

(3) Mount the new planet gear and reverse lever following the removal steps in the reverse order.

Notes on f-1 through f-4:
After mounting all parts, check if the reverse lever moves in the directions marked ⓒ-5 when the reverse gear is turned clockwise and counterclockwise.

*After mounting the fixing gear, bend the claws ⑮ into the form of as shown in the Figure.



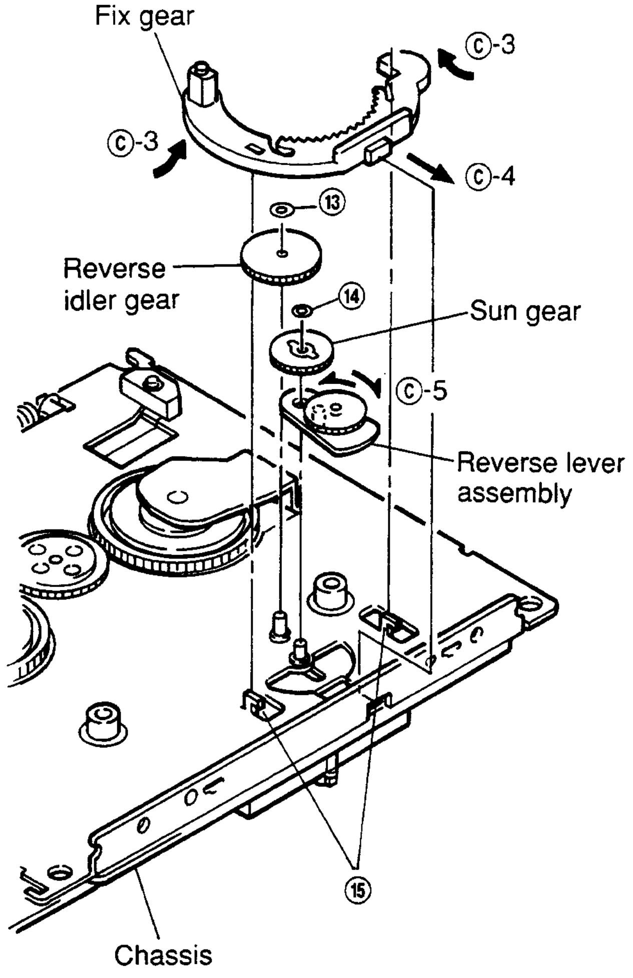


Figure 13

(f-5) Replacement of the clutch lever assembly and eject idler gear

(1) After removing the motor, remove the motor idler gear and the motor idler gear (B) and remove the clutch lever assembly as shown in Figure 10.

(2) Remove M1.2 lock washer ⑰ and remove the eject idler gear as shown in Figure 15.

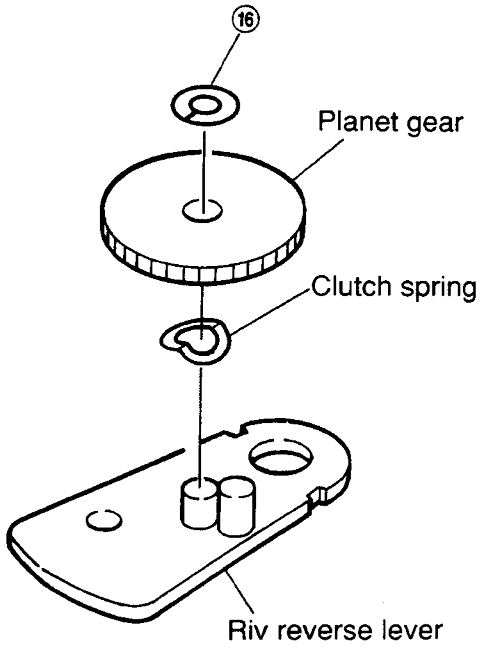
(3) Mount the new gears and clutch lever following the removal steps in the reverse order.

Note: When mounting the gears to the lever, apply grease (FLOIL 425A) to the position ⓒ-6 as shown in Figure 15. Align the position ⓒ-7 with the position ⓒ-8 and mount the clutch lever as shown in Figures 10 and 15.

(f-6) Replacement of the pause gear

(1) Remove M1.2 lock washer ⑱ and remove the pause gear pulling it up from the stud of the chassis as shown in Figure 10.

(2) Mount the new gear following the removal steps in the reverse order.



[Disassembly Reverse Lever Assembly]

Figure 14

(f-7) Replacement of the pause idler gear (B)

(1) After removing the motor and the motor idler gear, remove M1.2 lock washer ⑲ and remove the gear by pulling it up from the stud of the chassis as shown in Figure 10.

(2) Mount the new gear by following the removal steps in the reverse order.

(f-8) Replacement of the take-up gear

(1) After removing the belt and the pulley idler gear, remove M1.2 lock washer ⑳ by pulling it up from the stud of the riv take-up lever assembly as shown in Figure 10.

(2) Remount the take-up gear following the removal steps in the reverse order.

Notes on f:
Do not reuse the used washers. Take care to avoid damage by piercing and tearing.

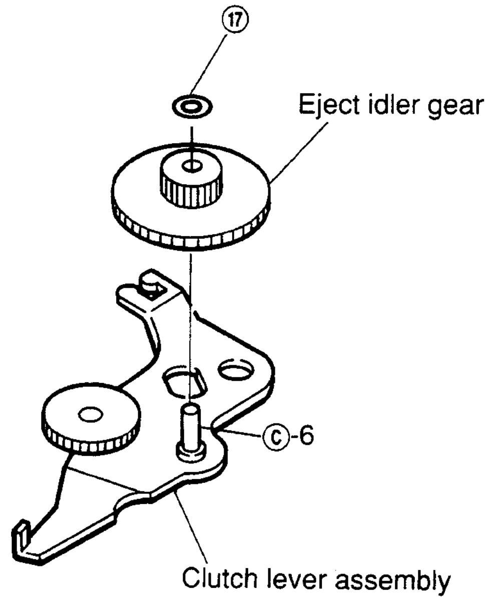


Figure 15

4. Replacement of the parts mounted on the front of the chassis

a. Replacement of the audio P.C. board

(1) Remove two solders ㉑ and remove the parallel wire (7P) and the head P.C. board as shown in Figure 16.

(2) Adjust the two claws ㉒ to the rectangular holes on the P.C. board and remove the P.C. board as shown in Figure 16.

(3) After replacement, mount the new P.C. board following the removal steps in the reverse order.

Note: The head P.C. board and the parallel wire are easily damaged. Handle them with care. Refer to Item 2-C to make sure that the temperature of the soldering iron and the soldering time are proper. Do not bring the soldering iron near the head P.C. board.

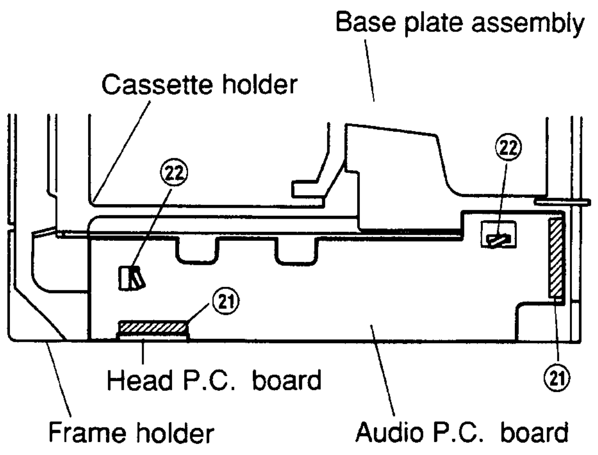


Figure 16

b. Replacement of the control P.C. board

(1) Remove seven solders ⑧ and remove the three parallel wires and the wires of the eject solenoid and of the play solenoid as shown in Figure 11.

(2) Remove five claws ㉓ and remove the P.C. board as shown in Figure 11. [For GR75E020, GR75E010, GR75E01A, GR75E01C models]
Remove four claws ㉓ and remove the P.C. board as shown in Figure 11.
[For GR75L020, GR75L010 models]

(3) After replacing the old P.C. board with a new one, mount it following the removal steps in the reverse order.

Note: As mentioned in Item 4-a, handle the parallel wires carefully, and be sure that the temperature of the soldering iron and the soldering time are proper. As the wires of the eject solenoid are not insulated, do not let them cross each other.

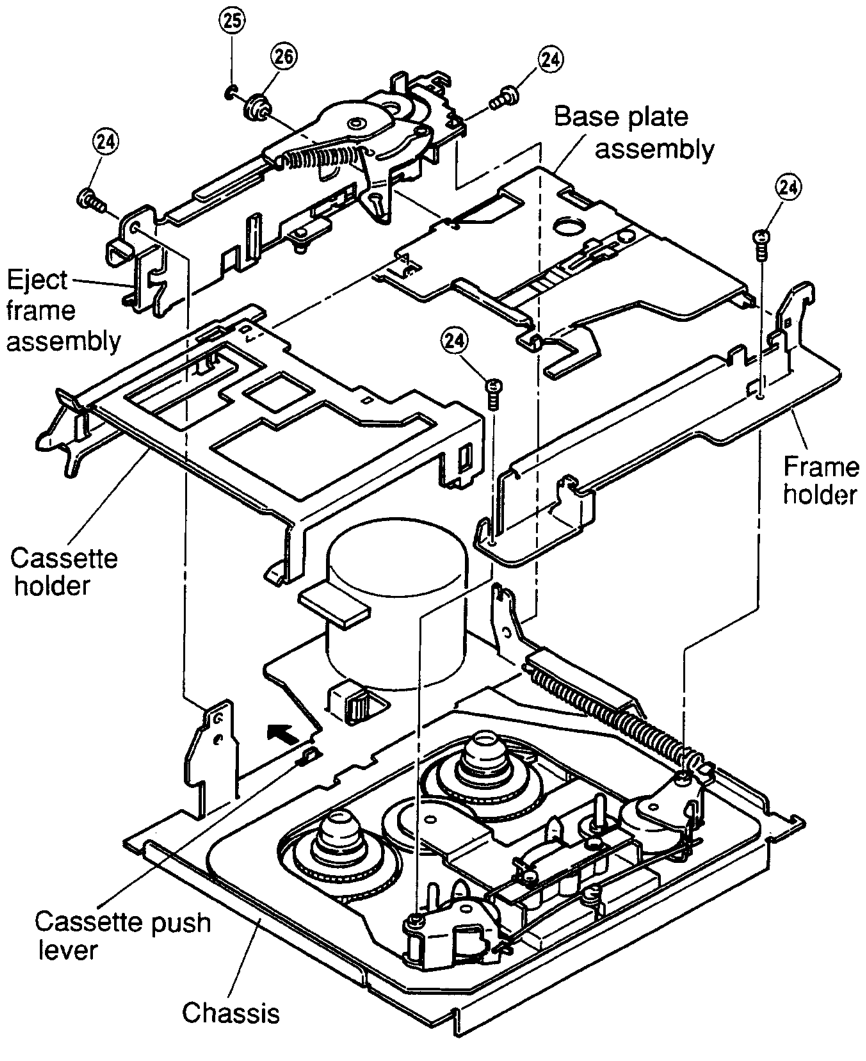


Figure 17

c. Disassembly and assembly of the cassette holder

(1) Remove four screws ㉔ and remove the eject frame assembly and the frame holder as shown in Figure 17.

(2) Remove M1.2 lock washer ㉕ and plate base roller ㉖ and remove the cassette holder and the base plate assembly as shown in Figure 17.

(3) Remount them following the removal steps in the reverse order.

Notes:
1. When mounting the cassette holder and the base plate, insert the slider shaft into the eject arm and fix them turning the slider shaft in the direction indicated by the arrow in the figure. Make sure that the cassette holder and the base plate are in the cassette-in mode during this operation. (Refer to Figure 18).
2. When mounting the eject frame assembly, push the cassette push lever in the direction indicated by the arrow in the Figure 17.
3. When mounting the base plate assembly and the eject frame assembly, or when mounting the eject frame assembly to the chassis, do not apply excessive force to avoid deformations of the eject arm and the frame.
4. Do not reuse the used washers. Take care to avoid damage by piercing and tearing.

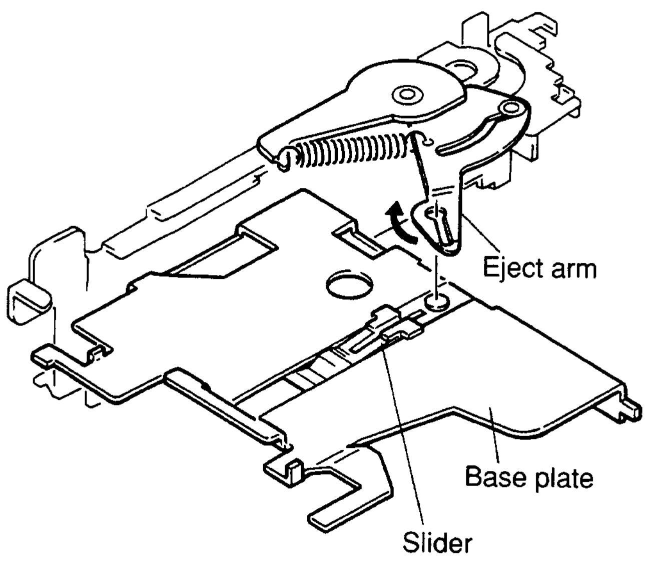


Figure 18

d. Replacement of the reels

(1) Remove M1.7 two lock washers ㉖ (Refer to figure 19).

(2) Move the select lever in the direction marked Ⓓ-1 in the Figure and remove the reel by gripping the reel gear as shown in Figure 19.

(3) After replacement, mount the new reels following the removal steps in the reverse order.

(4) After mounting, check the tape speed and the wow and flutter with test tape MTT-111.

Note: Since the reel is easily loosened if the cap is gripped, always handle it gripping the gear. Do not reuse the used washers. Take care to avoid damage by piercing and tearing.

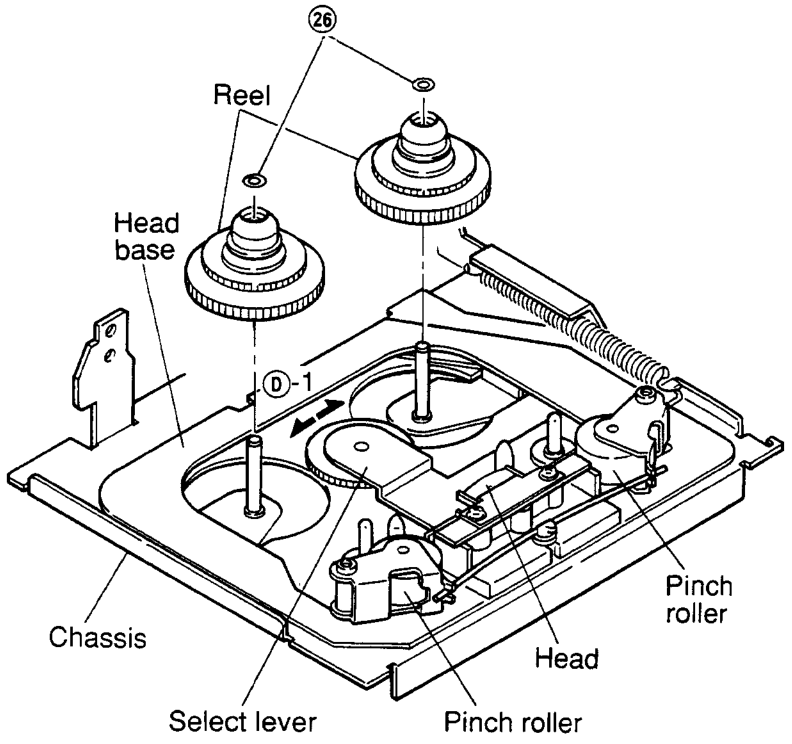


Figure 19

Supl

e. Replacement of the pinch rollers

(1) Remove pinch roller spring ㉗ as shown in Figure 20.

(2) Remove M3.1 two lock washers ㉘ and remove the pinch roller as shown in Figure 20.

(3) Mount the pinch rollers following the removal steps in the reverse order.
Apply insulation coating to the position Ⓓ-2 of the pinch roller as shown in Figure 20.

Note: Make sure that the pinch rollers are thoroughly fixed and that they are not deformed. Do not reuse used lock washers. Take care to avoid damage by piercing and tearing.

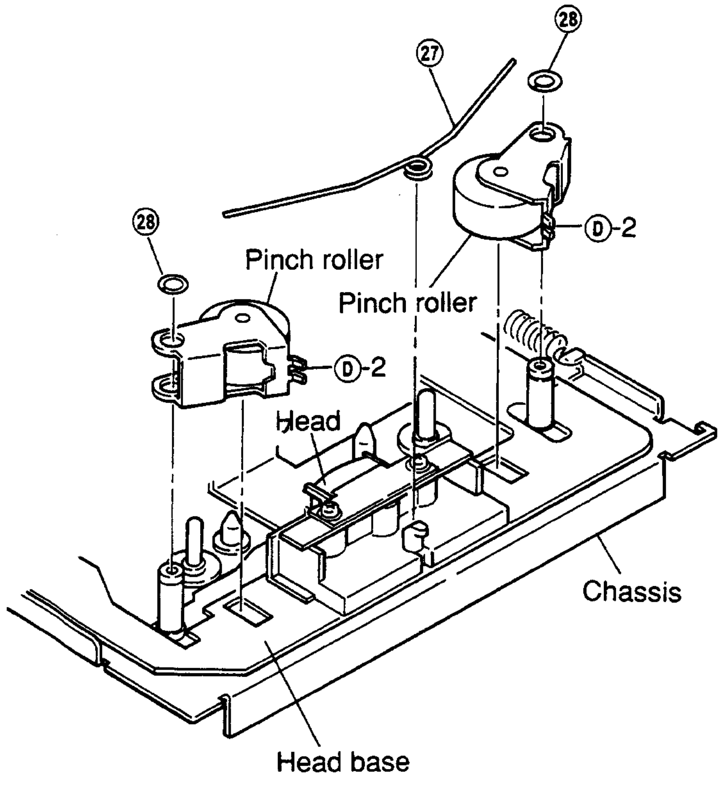

㉘
㉗
㉘
Ⓓ-2
Pinch roller
Pinch roller
Ⓓ-2
Head
Chassis
Head base

Figure 20

f. Replacement of the head

(1) After removing the pinch roller spring, remove two screws ㉙ as shown in Figure 21.

(2) Remove solder ㉚ and remove the head from the head P.C. board as shown in Figure 22.

(3) After replacement, mount the new head following the removal steps in the reverse order.

Notes: 1. Refer to Item 2-C to make sure that the temperature of the soldering iron and the soldering time are proper. Do not bring the soldering iron near the head P.C. board. Make sure that the head P.C. board is not lifted.

2. Fasten the two screws with a fastening torque of 2.3 kg.cm. Note that the tension of the head spring can be decreased if the screws are fastened too strongly.

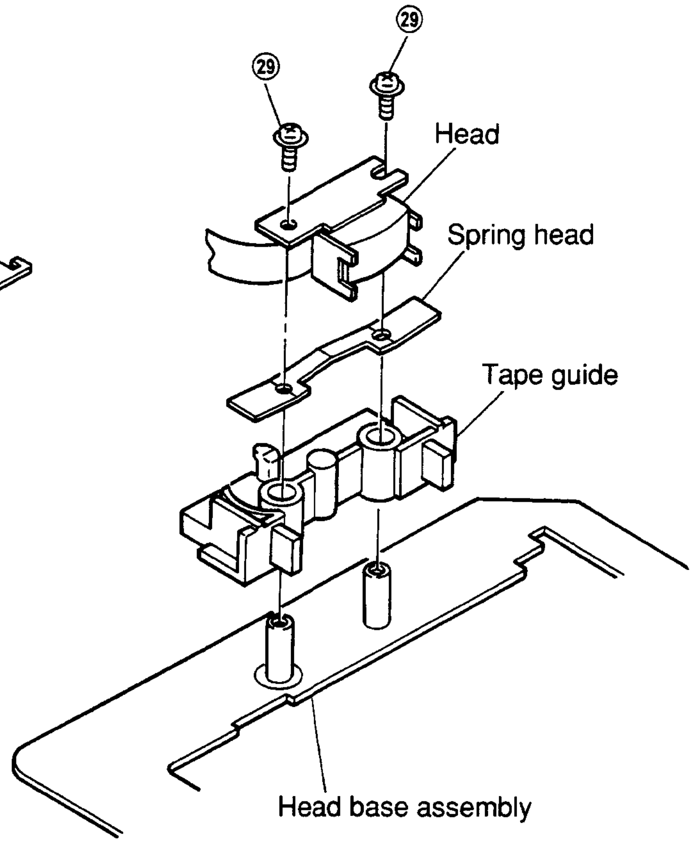

㉙
㉙
Head
Spring head
Tape guide
Head base assembly

Figure 21

(4) Adjust the height of the head as shown in Figures 23, 24 and 25.

① Place the height adjustment gauge (AI-500) on the head base, and adjust the height so that the check bar fits in the tape head guide smoothly.

② When the check bar touches the top (or bottom) of the tape guide, insert a spacer (t 0.1 mm or polislider washer t 0.13 mm).
If necessary, remove the spacer.

Note: If you do not have a height gauge like described in (4)-①, run the tape at normal speed and adjust the height of the head and the tape head guide so that the tape does not curl.

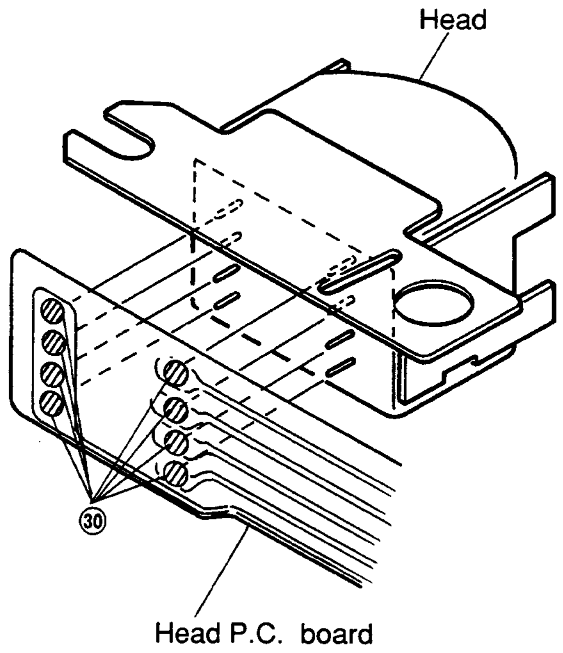

Head
㉚
Head P.C. board

Figure 22

(5) After having assembled the complete mechanism, adjust the angle of the head with test tape MTT-113C. (Refer to chapter "Adjustment of the head angle".) After the adjustment, apply the screw lock and fix the screws.

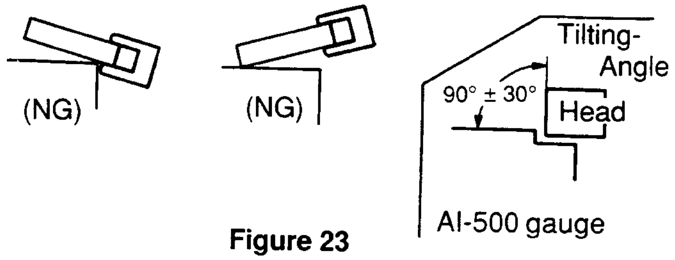

(NG)
(NG)
Tilting-Angle
90° ± 30°
Head
AI-500 gauge

Figure 23

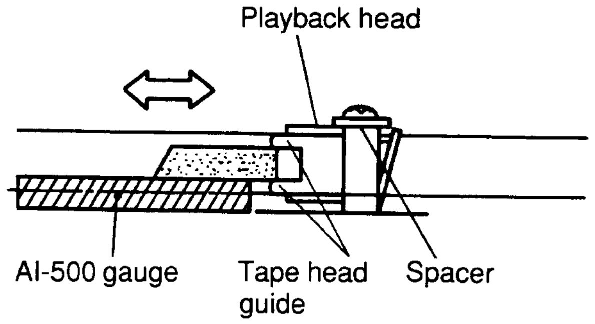
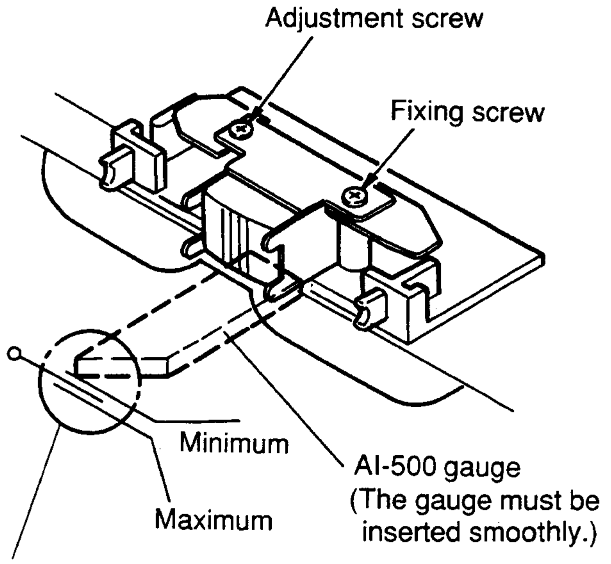

Playback head
AI-500 gauge
Tape head guide
Spacer

Figure 24

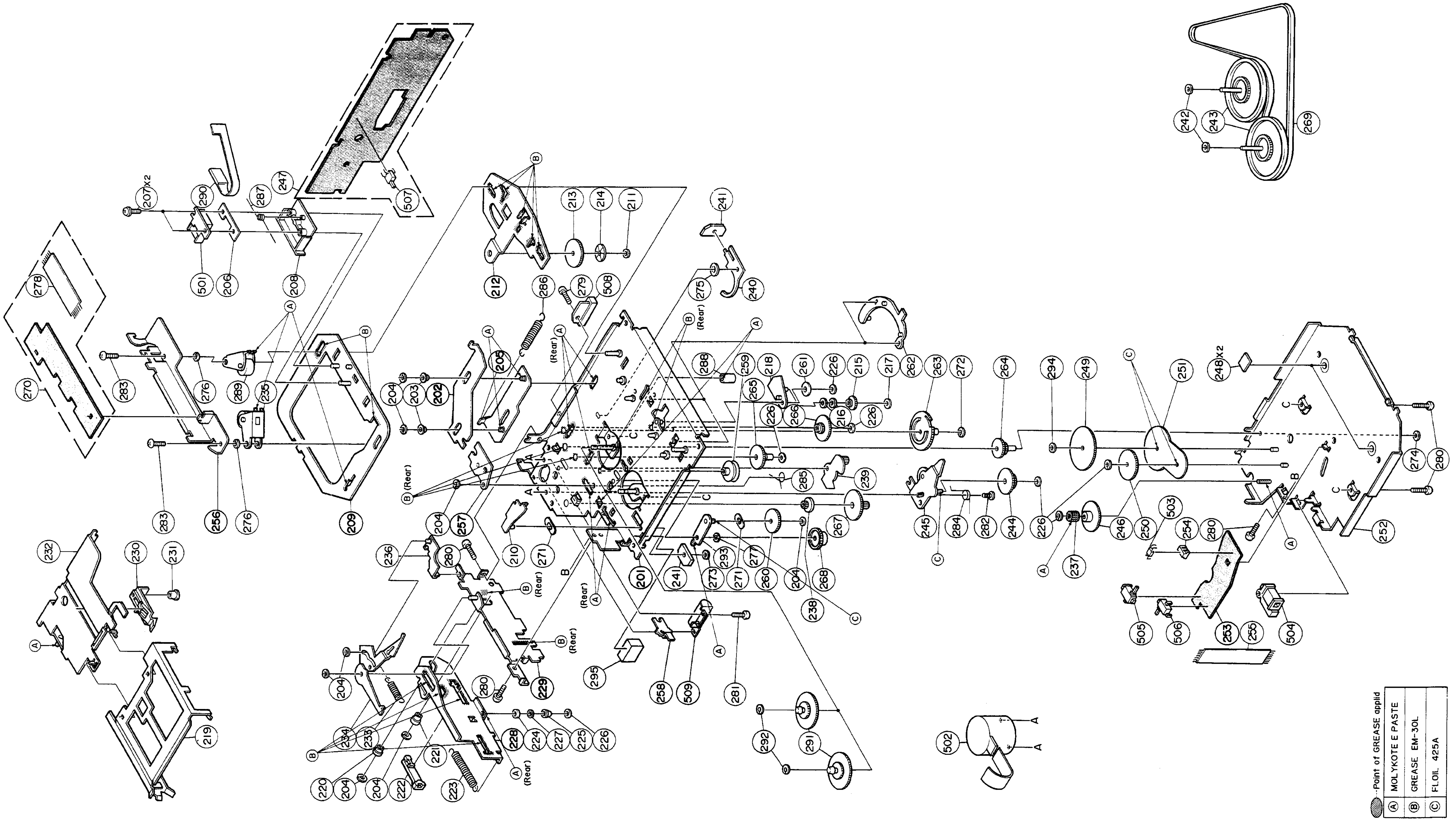

Adjustment screw
Fixing screw
Minimum
Maximum
AI-500 gauge
(The gauge must be inserted smoothly.)

The nosepiece of the gauge must be between the minimum and maximum positions.

Figure 25

Exploded View (1/3)

- **For GR75E010/01A/01C/020 Models**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A
B
C
(Rear)

▨ -Point of GREASE applid	
Ⓐ	MOLYKOTE E PASTE
Ⓑ	GREASE EM-30L
Ⓒ	FLOIL 425A

Cassette Deck Assembly Parts List (1/3)

Note : The parts without parts list are not supplied.

Symbol No.	IN-dex	Part No.	Description
203	3-C	43A11072W01	Roller, Sub Head
204		04B41345P01	Washer, Lock(M1.2)
206	2-B	41A10095W01	Spring, Head
207	2-B	03S40019G03	Screw, F-Locks(M2x4)
208	2-B	43B12545W01	Tape, Guide
210	4-C	01A10206W01	Assy..Riv Lever R/F Sol
211	2-D	04B41345P29	Washer, Lock(M2.6)
213	2-D	44A10295W01	Gear, Sensor
214	2-D	14A10681W01	Reflector
215	3-E	44A10142W01	Gear, Planet
216	3-E	41A10097W02	Spring, Clutch
217	3-E	04B41345P35	Washer, Lock(M1.7)
218	3-E	01A21853W01	Assy., Riv Lever Reverse
219	4-B	07B10074W01	Holder, Cassette
220	5-B	43A12583W01	Roller, Eject
221	5-C	43A63281F01	Roller, Plate Base
222	5-C	44A82206F01	Rack
223	5-C	41B10386W03	Spring, GR(Rack)
224	4-C	43A10121W01	Roller, Eject A
225	4-D	43A10360W01	Roller, Eject B
226		04B41345P11	Washer, Lock(M1.2)
227	4-D	43A12377W01	Roller, Eject C
230	4-A	45B10376W01	Slider
231	4-B	47A63278F01	Shaft, Slider
232	4-A	01A10212W01	Assy..Riv Plate Base
233	4-C	41B10386W01	Spring, Eject Arm
234	4-B	01A10148W01	Assy., Riv Eject Arm A
235	3-B	01B10381W02	Assy., Pinch Roller
236	4-C	45A10087W01	Lever Pack In SW
237	4-F	44A12975W01	Pinion, Eject
238	4-E	44A13617W01	Gear, Motor Idler(B)
239	3-E	01A10201W02	Assy., Riv Lever Pause
240	2-D	45A10092W01	Lever, Play
241		76T10374W01	Chip
242	1-G	04S40075G05	Washer Polyslider (M2.1)
243	1-G	01A10368W01	Assy., Flywheel
244	3-F	44A10141W01	Gear, Eject Idler
245	3-E	01A10205W01	Assy., Riv Lever Clutch A
246	3-F	44A10145W01	Gear, Eject
247	2-B	01V11500W18	Assy., GR Control P.C. Board
248	3-G	43A90918F01	Spacer, Polyslider
249	3-F	44A11063W01	Gear, Bottom A
250	3-F	44A11064W01	Gear, Bottom B
251	3-G	34A11122W02	Washer, GR
252	3-H	01A10210W02	Assy., Riv. Cover Bottom
254	3-G	15B11065W01	Guide, Photo
255	4-G	30T15126W01	Wire, PC Sensor(7P)
258	4-D	45A10101W01	Lever, Eject Sol
259	3-D	49A10131W01	Pulley, Idler
260	4-E	44A10133W01	Gear, Take Up
261	3-E	44A10134W01	Gear, Sun
262	3-E	44B10135W01	Gear, Fix
263	3-E	44B10136W01	Gear, Pause
264	3-F	44A10137W01	Gear, Pause Idler A
265	3-D	44A10379W01	Gear, Pause Idler B
266	3-E	44A10138W01	Gear, Reverse Idler
267	3-E	44A10139W01	Gear, Motor Idler
268	4-E	44A11062W01	Gear, Reel Idler
269	1-G	42A10380W01	Belt, GR
● 270	3-A	01V14700W68	Assy., GR Audio P.C. Board
■ 270	3-A	01V11500W19	Assy., GR Audio P.C. Board
▲ 270	3-A	01V11500W19	Assy., GR Audio P.C. Board
○ 270	3-A	01V11500W19	Assy., GR Audio P.C. Board
271	4-D	41A10097W02	Spring, Clutch
272	3-F	04B41345P15	Washer, Lock(M1.2)
273	4-D	04B41345P02	Washer, Lock(M1.7)
274	3-H	04B41345P17	Washer, Lock(M1)
275	2-D	04B41345P30	Washer, Lock(M3.1)
276	3-B	04B41345P32	Washer, Lock(M3.1)
277	4-E	04B41345P06	Washer, Lock(M2.1)
278	2-A	30T15126W02	Wire, PC Joint 7P
279	2-D	03S44205G78	Screw, Pan(M2x6)
280		03S44205G30	Screw, Pan(M2.6x4)
281	4-D	03S72235F38	Screw, Pan(M2x3.3)
282	3-F	03A12132W02	Screw, Eject Clutch (M2x2.3)
283		03S43997P64	Screw, Pan(M1.7x3)
284	3-F	41A10384W01	Spring, Eject Clutch
285	3-E	41A10385W01	Spring, Cas Push
286	2-C	41B10386W02	Spring, Sub Head
287	2-B	41A10387W01	Spring, Pinch Roller
288	3-D	43A12719W01	Roller, Pause

Notes : ● ; For GR75E020 model only ■ ; For GR75E010 model only
▲ ; For GR75E01A model only ○ ; For GR75E01C model only

Others ; Common

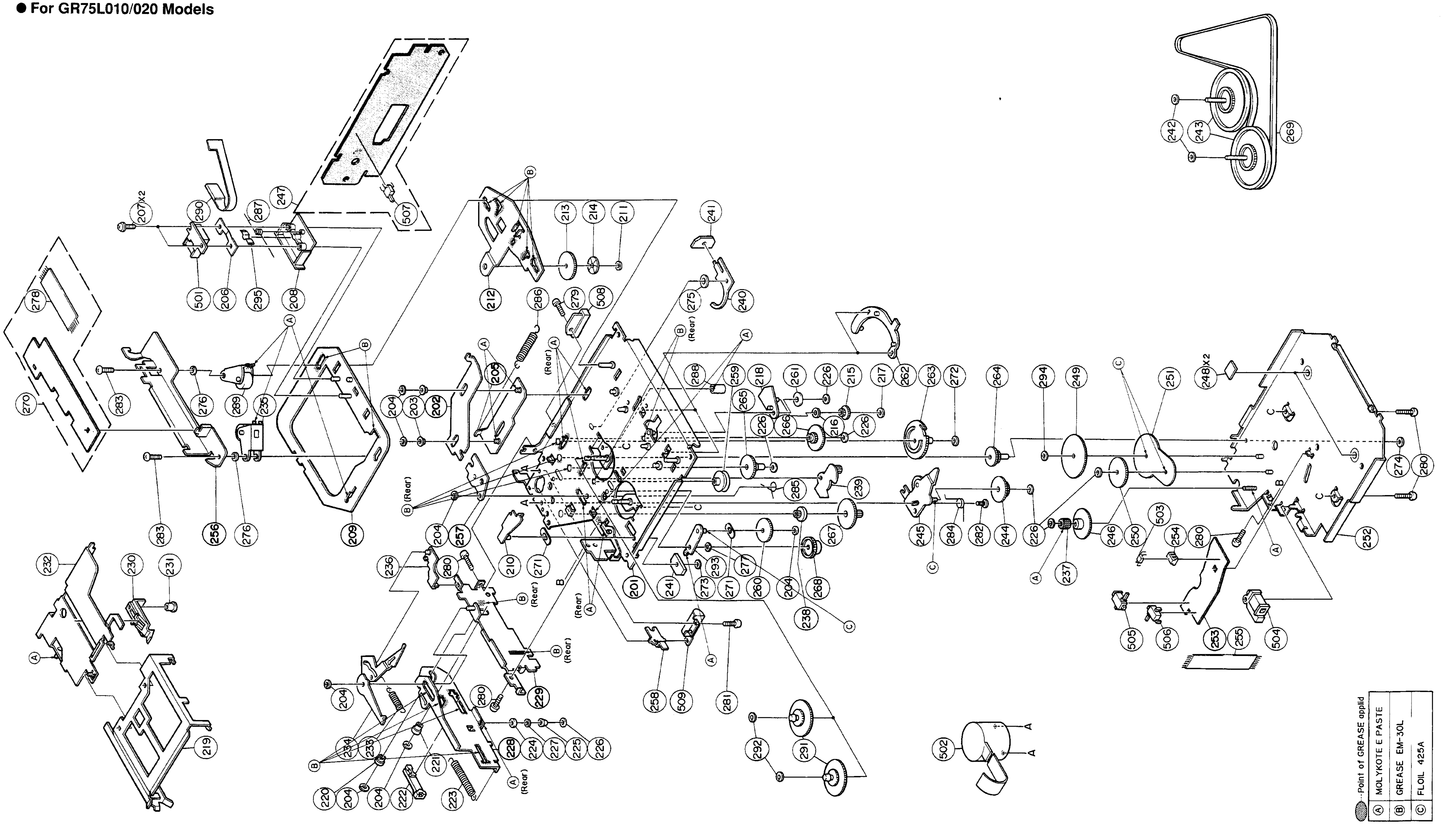
Symbol No.	IN-dex	Part No.	Description
289	3-B	01B10381W01	Assy., Pinch Roller
290	2-B	84T10367W01	Head P.C. Board
● 291	4-E	01T15164W01	Assy., Reel
■ 291	4-E	01T15164W01	Assy., Reel
▲ 291	4-E	01T15164W02	Assy., Reel
○ 291	4-E	01T15164W01	Assy., Reel
292	4-E	04B41345P12	Washer, Lock(M1.7)
● 293	4-D	01A11078W01	Assy., Riv Lever Take Up
■ 293	4-D	01A11078W01	Assy., Riv Lever Take Up
▲ 293	4-D	01A11078W01	Assy., Riv Lever Take Up
○ 293	4-D	01A30161W01	Assy., Riv Lever Take Up
294	3-F	04B41345P34	Washer, Lock(M1.2)
295	4-D	75S12196W88	Rubber, Pad
	Miscellaneous		
● 501	2-B	88T15971W01	Head
■ 501	2-B	88T10373W01	Head
▲ 501	2-B	88T10373W01	Head
○ 501	2-B	88T10373W01	Head
502	4-E	01V11500W64	Assy., Motor
503	3-G	51T15144W01	Sensor, Photo
504	4-G	01T10371W01	R/F Sol. Assy.
505	4-F	40T15382W01	SW., Detector (Pack Down)
506	4-G	40T15382W01	SW., Detector(Metal)
507	2-C	40T15222W01	SW., Detector (Pack In)
508	2-D	01T15249W01	Assy., Play Solenoid
509	4-D	01T10369W02	Assy., Eject Solenoid

Notes : ● ; For GR75E020 model only ■ ; For GR75E010 model only
▲ ; For GR75E01A model only ○ ; For GR75E01C model only

Others ; Common

Exploded View (2/3)

- **For GR75L010/020 Models**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Point of GREASE applid	
Ⓐ	MOLYKOTE E PASTE
Ⓑ	GREASE EM-30L
Ⓒ	FLOIL 425A

Supl

Cassette Deck Assembly Parts List (2/3)

Note : The parts without parts list are not supplied.

Symbol No.	IN-dex	Part No.	Description
203	3-C	43A11072W01	Roll, Sub Head
204		04B41345P01	Washer, Lock(M1.2)
206	2-B	41A21671W01	Spring, Head
207	2-B	03S40019G03	Screw, F-Locks(M2x4)
208	2-B	43B12545W01	Tape, Guide
210	4-C	01A10206W01	Assy., Riv Lever R/F Sol.
211	2-D	04B41345P29	Washer, Lock(M2.6)
213	2-D	44A10295W01	Gear, Sensor
214	2-D	14A10681W01	Reflector
215	3-E	44A10142W01	Gear, Planet
216	3-E	41A10097W02	Spring, Clutch
217	3-E	04B41345P31	Washer, Lock(M1.7)
218	3-E	01A21853W01	Assy., Riv Lever Reverse
219	4-B	07B10074W01	Holder, Cassette
220	5-B	43A12583W01	Roller, Eject
221	5-C	43A22153W01	Roller, Plate Base
222	5-C	44A82206F01	Rack
223	5-C	41B10386W03	Spring, GR(Rack)
224	4-C	43A10121W01	Roller, Eject(A)
225	4-D	43A10360W01	Roller, Eject(B)
226		04B41345P11	Washer, Lock(M1.2)
227	4-D	43A12377W01	Roller, Eject(C)
230	4-A	45B10376W01	Slider
231	4-B	47A63278F01	Shaft, Slider
232	4-A	01A10212W01	Assy., Riv Plate Base
233	4-C	41B10386W01	Spring, Eject Arm
234	4-B	01A21754W01	Assy., Riv Eject Arm(A)
235	3-B	01B10381W02	Assy., Pinch Roller
236	4-C	45A10087W01	Lever, Pack In SW.
237	4-F	44A20314W01	Pinion, Eject
238	4-E	44A13617W01	Gear, Motor Idler(B)
239	3-E	01A10201W02	Assy., Riv Lever Pause
240	2-D	45A10092W01	Lever, Play
241		76T10374W01	Chip
242	1-G	04S40075G05	Washer, Polyslider (M2.1)
243	1-G	01A10368W01	Assy., Flywheel
244	3-F	44A10141W02	Gear, Eject Idler
245	3-E	01A10205W02	Assy., Riv Lever Clutch(A)
246	3-F	44A10145W01	Gear, Eject
247	2-B	01V23700W03	Assy., GR Control P.C. Board
248	3-G	43A90918F01	Spacer, Polyslider
249	3-F	44A11063W01	Gear, Bottom(A)
250	3-F	44A11064W01	Gear, Bottom(B)
251	3-G	34A11122W02	Washer, GR
252	3-H	01A10210W02	Assy., Riv. Cover Bottom
254	3-G	15B11065W01	Guide, Photo
255	4-G	30T15126W01	Wire, PC Sensor(7P)
258	4-D	45A10101W01	Lever, Eject Sol.
259	3-D	49A10131W01	Pulley, Idler
260	4-E	44A10133W01	Gear, Take Up
261	3-E	44A10134W01	Gear, Sun
262	3-E	44B10135W01	Gear, Fix
263	3-E	44B21670W01	Gear, Pause
264	3-F	44A10137W01	Gear, Pause Idler(A)
265	3-D	44A10379W01	Gear, Pause Idler(B)
266	3-E	44A10138W01	Gear, Reverse Idler
267	3-E	44A10139W01	Gear, Motor Idler
268	4-E	44A11062W01	Gear, Reel Idler
269	1-G	42A10380W01	Belt, GR
★ 270	3-A	01V11500W19	Assy., GR Audio P.C. Board
◆ 270	3-A	01V14700W68	Assy., GR Audio P.C. Board
271		41A10097W02	Spring, Clutch
272	3-F	04B41345P15	Washer, Lock(M1.2)
273	4-D	04B41345P02	Washer, Lock(M1.7)
274	3-H	04B41345P17	Washer, Lock(M1)
275	2-D	04B41345P30	Washer, Lock(M3.1)
276	3-B	04B41345P32	Washer, Lock(M3.1)
277	4-E	04B41345P06	Washer, Lock(M2.1)
278	2-A	30T15126W02	Wire, PC Joint 7P
279	2-D	03S44205G78	Screw, Pan(M2x6)
280		03S44205G30	Screw, Pan(M2.6x4)
281	4-D	03S72235F38	Screw, Pan(M2x3.3)
282	3-F	03A12132W02	Screw, Eject Clutch (M2x2.3)
283		03S43997P64	Screw, Pan(M1.7x3)
284	3-F	41A10384W01	Spring, Eject Clutch
285	3-E	41A10385W01	Spring, Cas. Push
286	2-C	41B10386W02	Spring, Sub Head
287	2-B	41A10387W01	Spring, Pinch Roller
288	3-D	43A12719W01	Roller, Pause
289	3-B	01B10381W01	Assy., Pinch Roller
290	2-B	84T10367W01	Head P.C. Board

Notes : ★ ; For GR75L010 model only ◆ ; For GR75L020 model only
Others : Common

Symbol No.	IN-dex	Part No.	Description
291	4-E	01T15164W03	Assy., Reel
292	4-E	04B41345P12	Washer, Lock(M1.7)
293	4-D	01A11078W01	Assy., Riv Lever Take Up
294	3-F	04B41345P34	Washer, Lock(M1.2)
295	2-B	26A20537W01	Shield, Plate

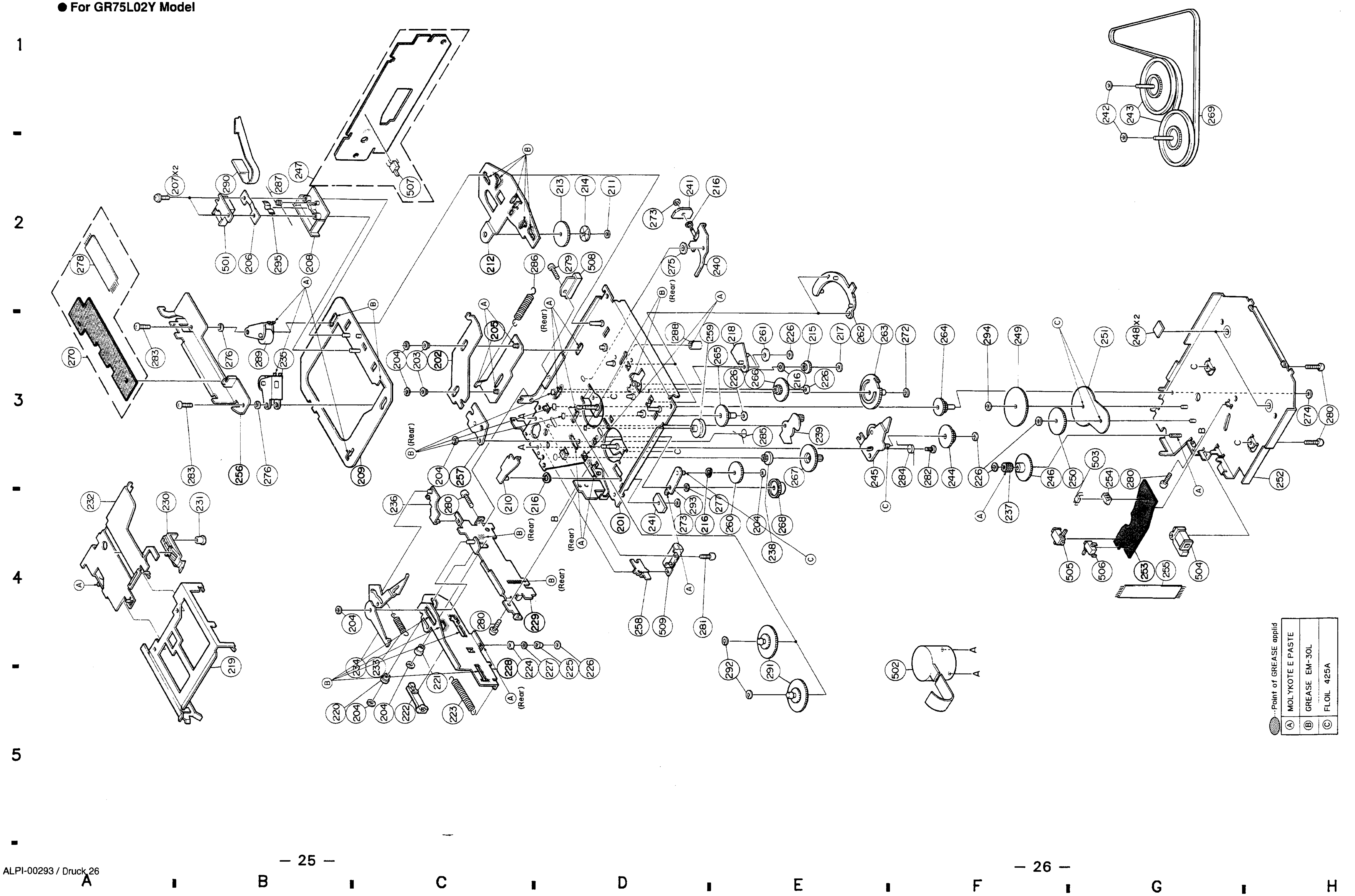
Miscellaneous

Symbol No.	IN-dex	Part No.	Description
★ 501	2-B	88T10373W01	Head
◆ 501	2-B	88T15971W01	Head
502	4-E	01V23900W60	Assy., Motor
503	3-G	51T15144W01	Sensor, Photo
504	4-G	01T10371W01	R/F Sol. Assy
505	4-F	40T15382W01	SW., Detector (Pack Down)
506	4-G	40T15382W01	SW., Detector (Metal)
507	2-C	40T15222W01	SW., Detector (Pack In)
508	2-D	01T15249W01	Assy., Play Solenoid
509	4-D	01T10369W02	Assy., Eject Solenoid

Notes : ★ ; For GR75L010 model only ◆ ; For GR75L020 model only
Others ; Common

Exploded View (GR-Y Series) (3/3)

- **For GR75L02Y Model**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(Rear)

	...Point of GREASE applid
Ⓐ	MOLYKOTE E PASTE
Ⓑ	GREASE EM-30L
Ⓒ	FLOIL 425A

Cassette Deck Assembly Parts List (GR-Y Series) (3/3)

Note : The parts without parts list are not supplied.

Symbol No.	IN-dex	Part No.	Description
203	3-C	43A11072W01	Roll, Sub Head
204		04B41345P01	Washer, Lock(M1.2)
206	2-B	41A21671W01	Spring, Head
207	2-B	03S40019G03	Screw, F-Locks(M2x4)
208	2-B	43B12545W01	Tape, Guide
210	4-C	01A10206W01	Assy., Riv Lever R/F Sol.
211	2-D	04B41345P38	Washer, Lock(M2.6)
213	2-D	44A10295W01	Gear, Sensor
214	2-D	14A10681W01	Reflector
215	3-E	44A10142W01	Gear, Planet
216		41A10097W02	Spring, Clutch
217	3-E	04B41345P31	Washer, Lock(M1.7)
218	3-E	01A21853W01	Assy., Riv Lever Reverse
219	4-B	07B10074W01	Holder, Cassette
220	5-B	43A12583W01	Roller, Eject
221	5-C	43A63281F01	Roller, Plate Base
222	5-C	44A82206F01	Rack
223	5-C	41B10386W03	Spring, GR(Rack)
224	4-C	43A10121W01	Roller, Eject(A)
225	4-D	43A10360W01	Roller, Eject(B)
226		04B41345P11	Washer, Lock(M1.2)
227	4-D	43A12377W01	Roller, Eject(C)
230	4-A	45B10376W01	Slider
231	4-B	47A63278F01	Shaft, Slider
232	4-A	01A10212W01	Assy., Riv Plate Base
233	4-C	41B10386W01	Spring, Eject Arm
234	4-B	01A21754W01	Assy., Riv Eject Arm(A)
235	3-B	01B10381W02	Assy., Pinch Roller
236	4-C	45A10087W01	Lever, Pack In SW.
237	4-F	44A20314W01	Pinion, Eject
238	4-E	44A13617W01	Gear, Motor Idler(B)
239	3-E	01A10201W02	Assy., Riv Lever Pause
240	2-D	01A30879W01	Assy., Riv. Play Sol.
241		76T10374W01	Chip
242	1-G	04S40075G05	Washer, Polyslider (M2.1)
243	1-G	01A10368W01	Assy., Flywheel
244	3-F	44A10141W01	Gear, Eject Idler
245	3-E	01A10205W02	Assy., Riv Lever Clutch(A)
246	3-F	44A10145W01	Gear, Eject
247	2-B	01V23700W04	Assy., GR Control P.C. Board

Symbol No.	IN-dex	Part No.	Description
248	3-G	43A90918F01	Spacer, Polyslider
249	3-F	44A11063W01	Gear, Bottom(A)
250	3-F	44A11064W01	Gear, Bottom(B)
251	3-G	34A11122W02	Washer, GR
252	3-H	01A10210W02	Assy., Riv. Cover Bottom
254	3-G	15B11065W01	Guide, Photo
255	4-G	30T15126W01	Wire, PC Sensor(7P)
258	4-D	45A10101W01	Lever, Eject Sol.
259	3-D	49A10131W01	Pulley, Idler
260	4-E	44A10133W01	Gear, Take Up
261	3-E	44A10134W01	Gear, Sun
262	3-E	44B10135W01	Gear, Fix
263	3-E	44B21670W01	Gear, Pause
264	3-F	44A10137W01	Gear, Pause Idler(A)
265	3-D	44A10379W01	Gear, Pause Idler(B)
266	3-E	44A10138W01	Gear, Reverse Idler
267	3-E	44A10139W01	Gear, Motor Idler
268	4-E	44A11062W01	Gear, Reel Idler
269	1-G	42A10380W01	Belt, GR
270	3-A	01V33300W03	Assy., GR Audio P.C. Board
272	3-F	04B41345P15	Washer, Lock(M1.2)
273		04B41345P02	Washer, Lock(M1.7)
274	3-H	04B41345P17	Washer, Lock(M1)
275	2-D	04B41345P30	Washer, Lock(M3.1)
276	3-B	04B41345P32	Washer, Lock(M3.1)
277	4-E	04B41345P37	Washer, Lock(M2.1)
278	2-A	30T15126W02	Wire, PC Joint 7P
279	2-D	03S44205G78	Screw, Pan(M2x6)
280		03S44205G30	Screw, Pan(M2.6x4)
281	4-D	03S72235F38	Screw, Pan(M2x3.3)
282	3-F	03A12132W02	Screw, Eject Clutch (M2x2.3)
283		03S43997P64	Screw, Pan(M1.7x3)
284	3-F	41A10384W01	Spring, Eject Clutch
285	3-E	41A10385W01	Spring, Cas. Push
286	2-C	41B10386W02	Spring, Sub Head
287	2-B	41A10387W01	Spring, Pinch Roller
288	3-D	43A12719W01	Roller, Pause
289	3-B	01B10381W01	Assy., Pinch Roller
290	2-B	84T35271W01	Head P.C. Board

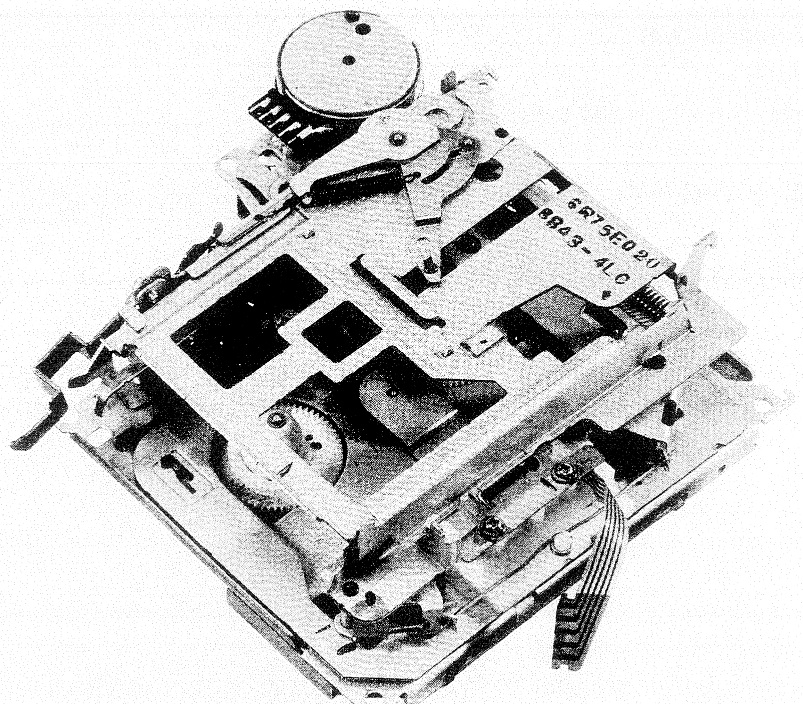
Symbol No.	IN-dex	Part No.	Description
291	4-E	01T15164W03	Assy., Reel
292	4-E	04B41345P12	Washer, Lock(M1.7)
293	4-D	01A30161W01	Assy., Riv Lever Take Up
294	3-F	04B41345P34	Washer, Lock(M1.2)
295	2-B	26A20537W01	Shield, Plate
Miscellaneous			
501	2-B	88T15971W01	Head
502	4-E	01V23900W60	Assy., Motor
503	3-G	51T15144W01	Sensor, Photo
504	4-G	01T10371W01	R/F Sol. Assy
505	4-F	40T15382W01	SW., Detector (Pack Down)
506	4-G	40T15382W01	SW., Detector (Metal)
507	2-C	40T15222W01	SW., Detector (Pack In)
508	2-D	01T15249W01	Assy., Play Solenoid
509	4-D	01T10369W02	Assy., Eject Solenoid

ALPINE®

SERVICE MANUAL

Cassette Deck Mechanism

ADDENDUM & REVISED (VI)


6R75E020
8843-4LC

GR/GR-Y SERIES

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Exploded View (GR-Y Series) (3/4) .... 25 to 26

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Exploded View (GR75H Series) (4/4) .... 29 to 30

Cassette Deck Assembly Parts List (GR75H Series) (4/4) .... 31 to 33

List of Usable Lock Washers

	SIZE	PARTS NO.	QUANTITY					
			GR75E Series	GR75L Series	GR-Y Series	GR75H 020/030/ 120/130	GR75H 12A/13A	GR75H 110
1	(M1.2 × 3.5 × 0.25)	04B41345P01	4	4	4	2	2	2
2	(M1.7 × 3.5 × 0.25)	04B41345P02	1	1	1	4	6	4
3	(M1.2 × 2.5 × 0.25)	04B41345P11	8	8	8	9	9	9
4	(M1.7 × 3.5 × 0.35)	04B41345P12	2	2	2	2	2	0
5	(M1.2 × 3.5 × 0.35)	04B41345P15	2	2	2	2	2	2
6	(M1 × 2.5 × 0.25)	04B41345P17	1	1	1	2	2	2
7	(M2.6 × 5 × 0.25)	04B41345P29	1	1	1	1	1	1
8	(M3.1 × 8 × 0.05)	04B41345P30	1	1	1	1	1	1
9	(M3.1 × 5 × 0.35)	04B41345P32	2	2	2	2	2	2
10	(M1.2 × 2.5 × 0.3)	04B41345P34	1	1	1	0	0	0
11	(M1.7 × 2.8 × 0.25)	04B41345P35	1	1	1	2	2	2
12	(M2.1 × 4 × 0.25)	04B41345P37	1	1	1	0	0	0
13	(M2.1 × 4 × 0.13)	04S40075G05	2	2	2	3	4	1
14	(M2.1 × 4 × 0.3)	04S40075G58	0	0	0	1	1	1
15	(M2.1 × 5.5 × 0.5)	04S40075G62	0	0	0	1	1	1
16	(M2.1 × 5.5 × 0.13)	04S40075G63	0	0	0	1	1	1

List of Usable Oil

1) Molykote G paste
2) Grease EM-30L
3) Grease PG-671

List of Usable Jigs

1) GR bottom gear jig (Part No. 44A20788W01)
2) Head height adjustment gauge
   AI-500 (Part No. AI-500)

Memo

Disassembly, Assembly and Replacement of Functional Parts

1. Disassembly and Assembly of Bottom Cover

(1) Turn the mechanism around as shown in Figure 1.
(2) Remove M1 lock washer ① as shown in Figure 1.
(3) Remove three screws ② as shown in Figure 1.
(4) Lift the bottom cover slowly from the position Ⓐ-1, pull the hooks out of the holes in the chassis, and remove the bottom cover as shown in Figure 1.
(5) When remounting the bottom cover, first turn the front of the mechanism up as shown in Figure 2.
(6) Slide the slider in the direction Ⓐ-2 as shown in Figure 2.
(7) Push down the cassette holder in the direction Ⓐ-3 as shown in Figure 2.
(8) Pull the door pin in the direction Ⓐ-4 so that the mechanism is locked in as shown in Figure 2.
(9) Turn the mechanism around as shown in Figure 3.
(10) Pull the automatic metal lever in the direction Ⓐ-5 and the RF solenoid chip in the direction Ⓐ-6 as shown in Figure 3.
(11) Insert the hooks of the bottom cover into the chassis in the direction Ⓐ-7, and then join the part Ⓐ-8 of the bottom cover to the chassis slowly, making sure that the 3 points indicated with the straight lines in the Figure 3 are fitted properly.
If there are troubles in mounting the bottom cover, do not apply force but remove the bottom cover once again and check the positions of the individual parts. (Refer to Figure 3.)
(12) Since the hooks marked Ⓐ-8 will be lifted slightly as shown in Figure 4, insert the jig through the hole Ⓐ-9, and fix it turning the jig slightly in the direction Ⓐ-11.
Instead of operation (12), turn the gear nose slowly with a precision screwdriver etc., taking care not to damage it.
After 2 to 3 turns, it will click into place.
(Refer to Figures 4 and 5.)
(13) Fix the screws and the lock washer that have been removed.

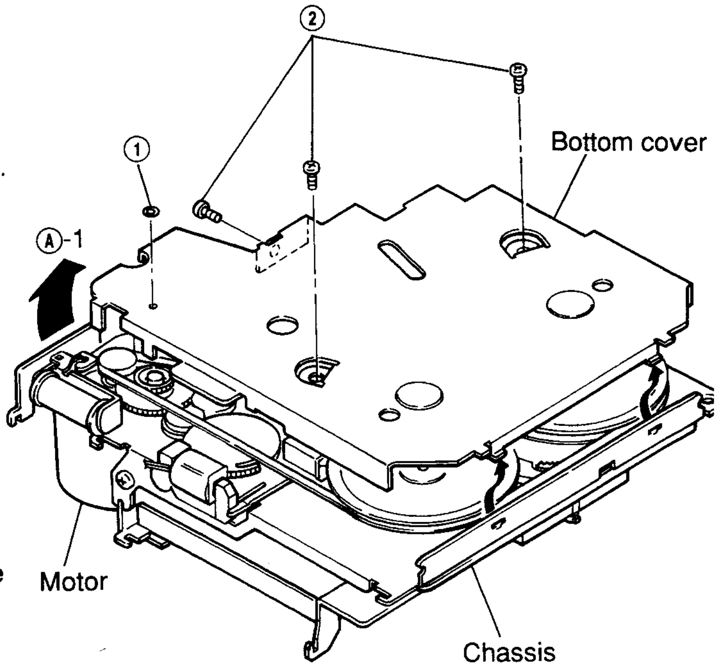


Figure 1

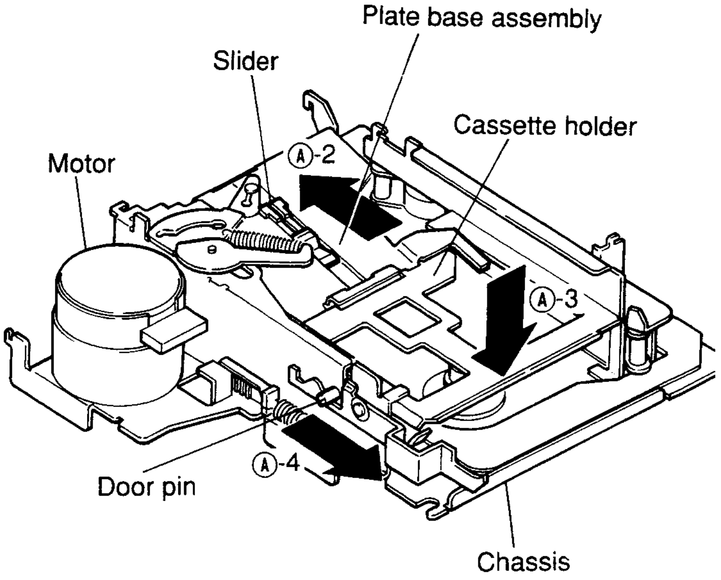


Figure 2

(14)Insert the jig into the hole Ⓐ-9 as shown in Figure and rotate the eject solenoid counterclockwise about 20 times, pulling it in the direction Ⓐ-10 with the finger.
Then the eject operation is completed.
Instead of operation (14), the eject operation can be performed by mounting the mechanism to the product. (Refer to Figures 4 and 5.)

Note: Do not reuse the used lock washers for mounting.
When turning the mechanism, be careful not to drop the gear and the flywheel.
Fasten the three screws with a fastening torque of 6 kg.cm.

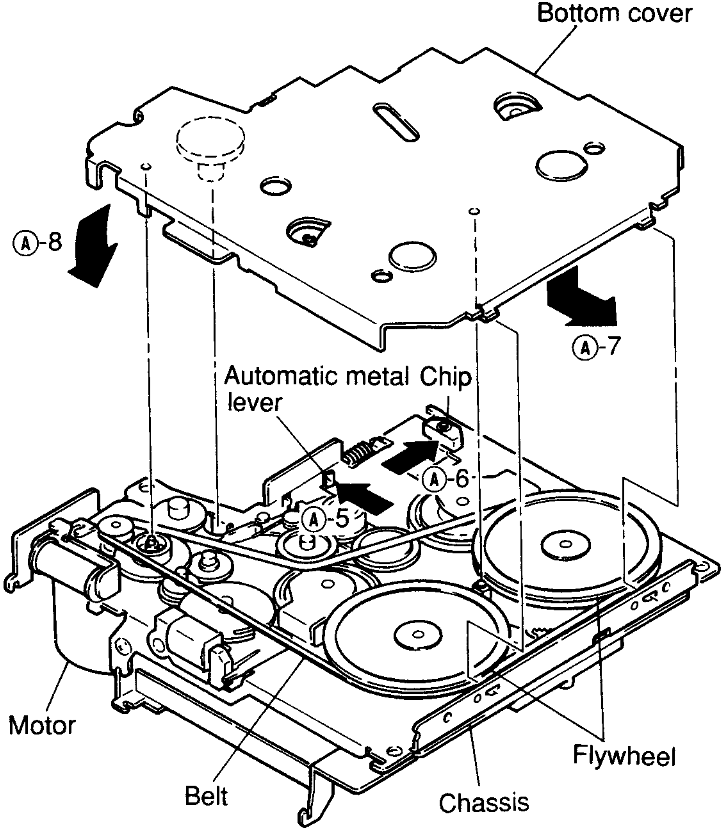

Bottom cover
Ⓐ-8
Ⓐ-7
Automatic metal lever
Chip
Ⓐ-6
Ⓐ-5
Motor
Belt
Chassis
Flywheel

Figure 3

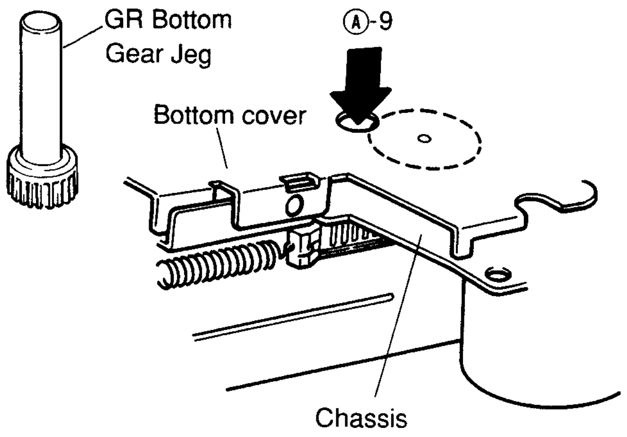

GR Bottom Gear Jeg
Ⓐ-9
Bottom cover
Chassis

Figure 4

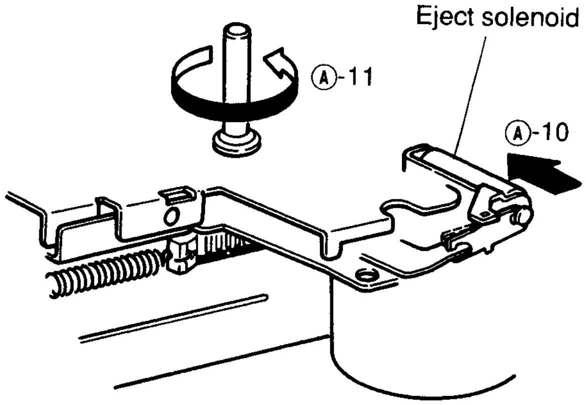

Eject solenoid
Ⓐ-11
Ⓐ-10

Figure 5

2. Replacement of the bottom cover mounting parts

a. Replacement of the eject gear

(1) Remove M1.2 lock washer ③ as shown in Figure 6.

(2) Pull the eject pinion out of the eject gear and remove the eject gear as shown in Figure 6.

(3) Apply the molykote E paste to the section Ⓑ-1, and mount the eject gear following the removal steps in the reverse order. After replacement is finished, make sure that the gear rotates smoothly. (Refer to Figure 6.)

Note: Do not reuse the used lock washers for remounting.
Take care to avoid damage by piercing and tearing.

b. Replacement of the RF solenoid

(1) Remove two solders ④ and remove the RF solenoid from the bottom cover by pulling it up as shown in Figure 6.

(2) Replace the solenoid with a new one, and remount it following the removal steps in the reverse order as shown in Figure 6.

Note: When removing solder ④, set the temperature of the soldering iron to 350° ± 10° and the soldering time to 1 – 3 seconds. Take care that the solder is not loose, that there is no shortcircuit and that the coating is not damaged.

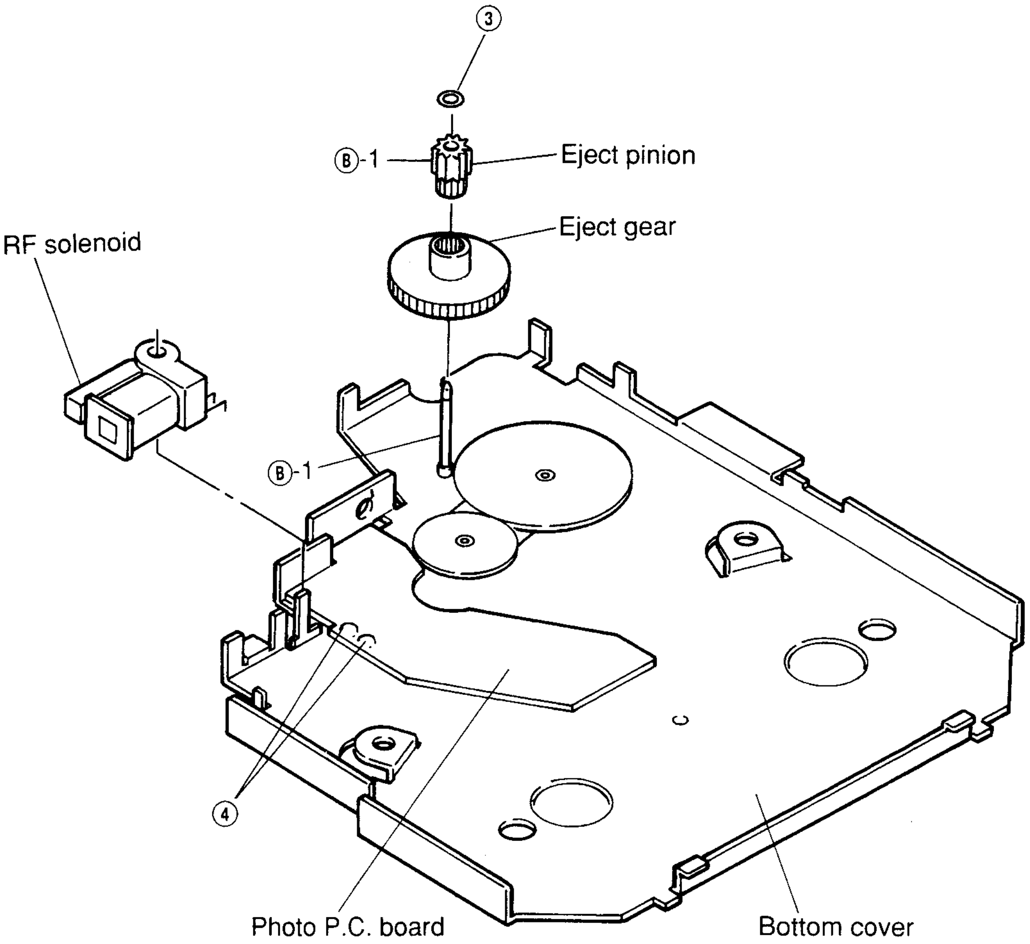


Figure 6

c. Replacement of the photo sensor

1. Remove four solders ⑤ as shown in Figure 7.
2. Remove the photo guide together with the photo sensor from the photo P.C. board as shown in Figure 7.
3. Insert the new photo sensor into the photo guide, and bend the legs of the photo sensor in the direction marked Ⓑ-2 as shown in Figure 7.
4. Insert the photo guide into the P.C. board and solder the legs so that the photo sensor is set as indicated by ⬚ in Figure 7.

Note: When using the soldering iron, set the temperature of the soldering iron to 350° ± 10° and the soldering time to 1 – 3 seconds. Take care that the solder is not loose, that there is no shortcircuit and that the coating is not damaged. Also take care that the photo guide is properly fixed and straight.

d. Replacement of the detector switch (Automatic metal pack-in)

1. Remove 4 solders ⑥ with which the switch is fixed as shown in Figure 7.
2. Prepare the terminals of the switch of the new solder as shown in Figure 8.
3. After that, insert the switch into the photo P.C. board, and solder the terminals.

Note: When using the soldering iron, refer to Item 2-C to make sure that the temperature of the soldering iron and the soldering time are proper. Also take care that the switch guide is properly fixed and straight.

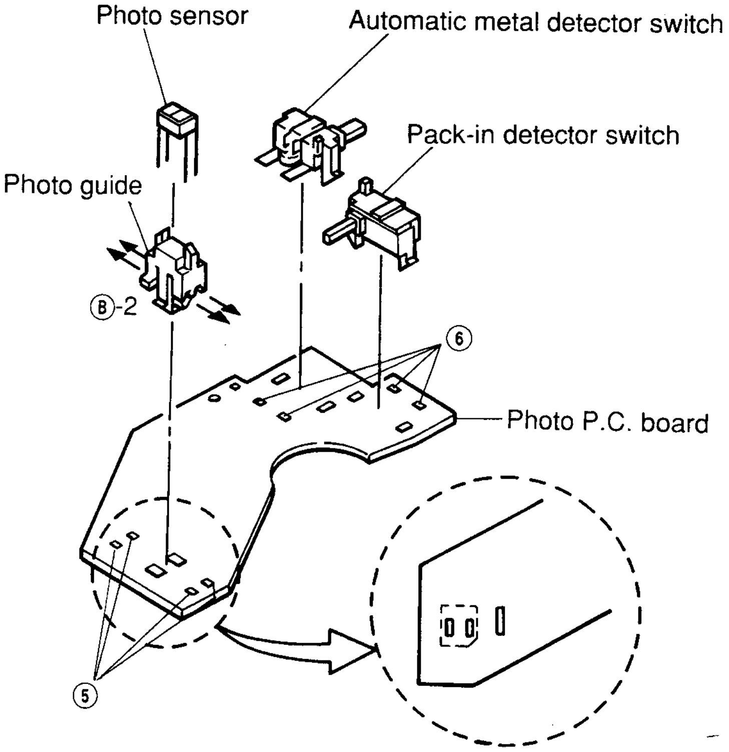


Figure 7

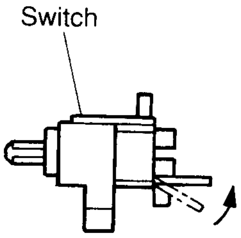


Figure 8

3. Replacement of the mounting parts on the rear of the main chassis

a. Replacement of the belt

(1) After removing the bottom cover, remove the belt.

(2) Clean the new belt with absolute alcohol, and fix it as shown in Figure 9.

Note: When fixing the belt, make sure that it is not twisted or dirty. When removing the belt, do not turn up the front of the chassis.

b. Replacement of the motor

(1) After removing the belt, remove spring ⑦ as shown in Figure 10.

(2) Remove solder ⑧-1, and remove the parallel wire (5P) from the control P.C. board as shown in Figure 11.

(3) Remove two screws ⑨ and ⑩, and remove the motor, taking care not to damage the motor idler gear. (Refer to Figure 10.)

(4) Mount the new motor following the removal steps in the reverse order.

Note: Refer to Item 2-C to make sure that the temperature of the soldering iron and the soldering time are proper. Since the parallel wire is very easily damaged, handle it with care.
Fasten the two screws with a fastening torque of 3 kg.cm.

*When inserting the clutch spring, be careful of the inserting direction as shown in the Figure.

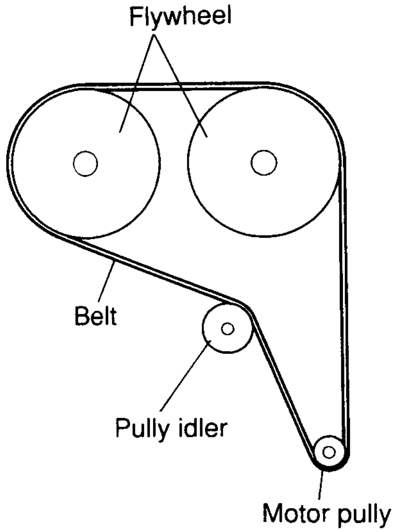

Flywheel
Belt
Pully idler
Motor pully

Figure 9

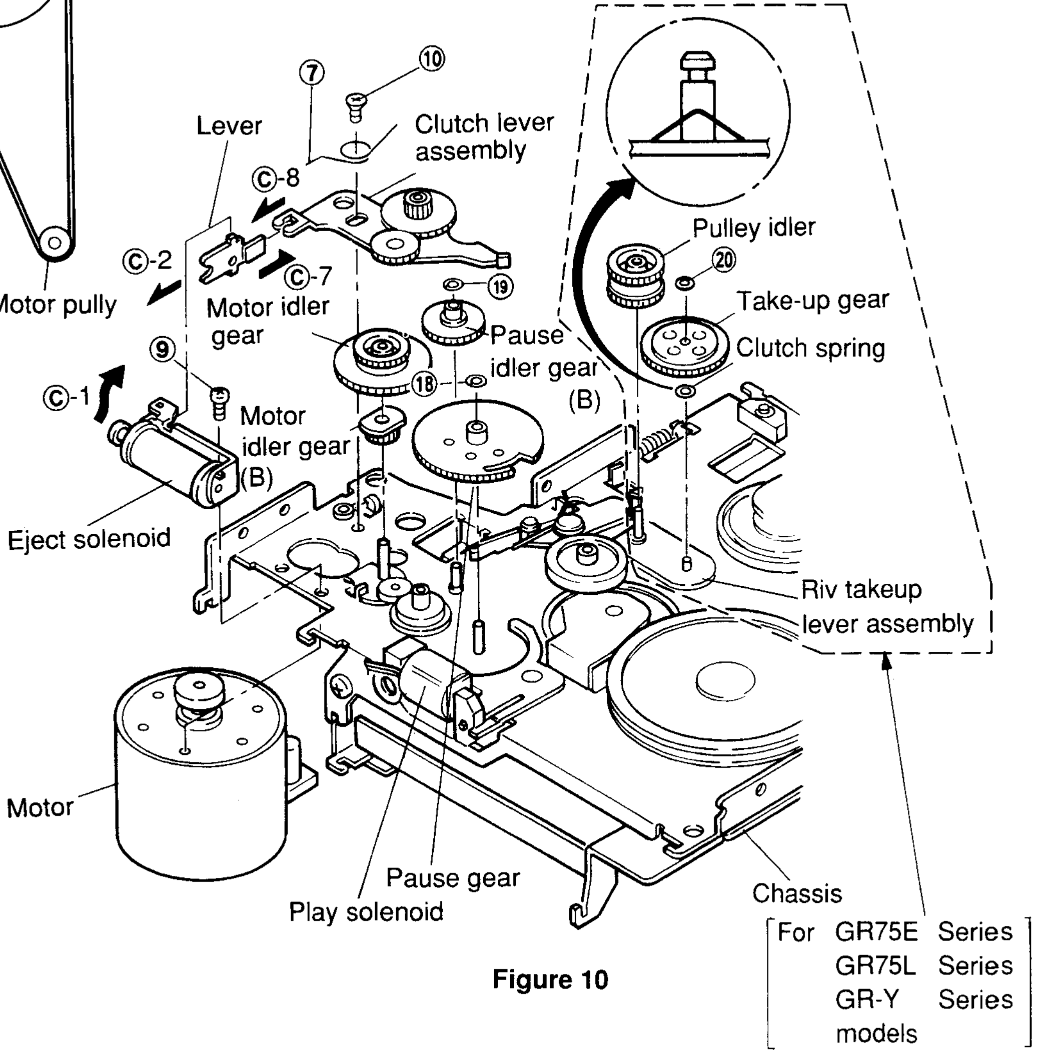

⑦
⑩
Lever
Clutch lever assembly
Ⓒ-8
Ⓒ-2
Ⓒ-7
Motor pully
Motor idler gear
⑨
Ⓒ-1
Motor idler gear (B)
Eject solenoid
⑲
Pause idler gear (B)
⑱
Pulley idler
⑳
Take-up gear
Clutch spring
Riv takeup lever assembly
Motor
Pause gear
Play solenoid
Chassis
For GR75E Series
GR75L Series
GR-Y Series
models

Figure 10

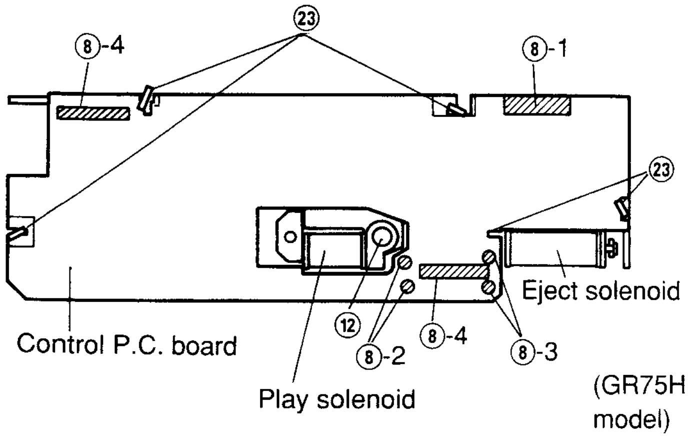
c. Replacement of the flywheels
  (1) After removing the belt, pull out the two flywheels. Take care not to loose the polyslider washer ⑪ located between the flywheel and the chassis. (Refer to Figure 12.)
  (2) Fix the polyslider washer to the new flywheel and mount the flywheel to the chassis.

d. Replacement of the play solenoid
  (1) Remove the two solders ⑧-2 as shown in Figure 11.
  (2) Remove one screw ⑫ and remove the solenoid as shown in Figure 11.
  (3) Mount the new solenoid following the removal steps in the reverse order.

Note: Refer to Item 2-C to make sure that the temperature of the soldering iron and the soldering time are proper. Fasten the screws with a fastening torque of 2.3 kg.cm.

e. Replacement of the eject solenoid
  (1) Remove two solders ⑧-3. Take care not to loose the tube that protects the wire. (Refer to Figure 11.)
  (2) Remove screw ⑨ and remove the solenoid as shown in Figure 10.
  (3) Align position ⓒ-1 of the new solenoid with position ⓒ-2 of the lever and fasten the screw as shown in Figure 10.
  (4) Lead the wire through the tube and solder it.

Note: Refer to Item 2-C to make sure that the temperature of the soldering iron and the soldering time are proper. Fasten the screws with a fastening torque of 3 kg.cm. As the solenoid wires are not insulated, do not let them cross each other.


㉓
⑧-4
⑧-1
㉓
Eject solenoid
Control P.C. board
⑫
⑧-2
⑧-4
⑧-3
Play solenoid

[For GR75E Series model]

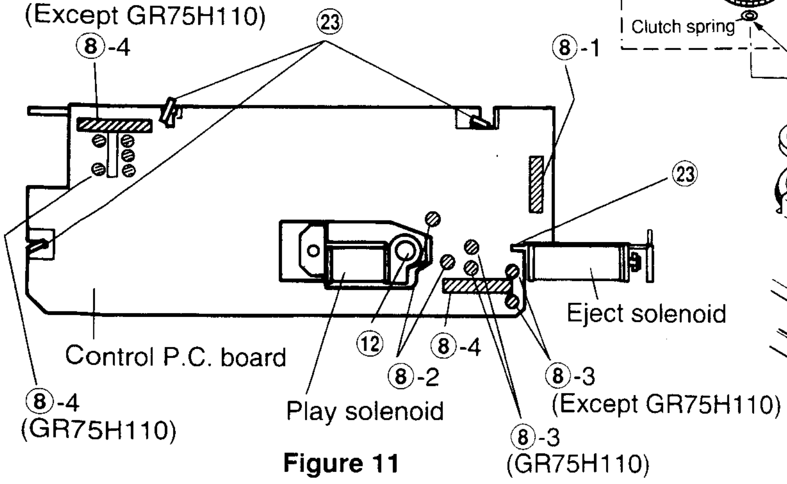

(Except GR75H110)
⑧-4
㉓
⑧-1
㉓
Eject solenoid
Control P.C. board
⑫
⑧-4
⑧-2
⑧-3
(Except GR75H110)
⑧-4
(GR75H110)
Play solenoid
⑧-3
(GR75H110)

Figure 11

[For GR75L Series
GR-Y Series
GR75H Series models]

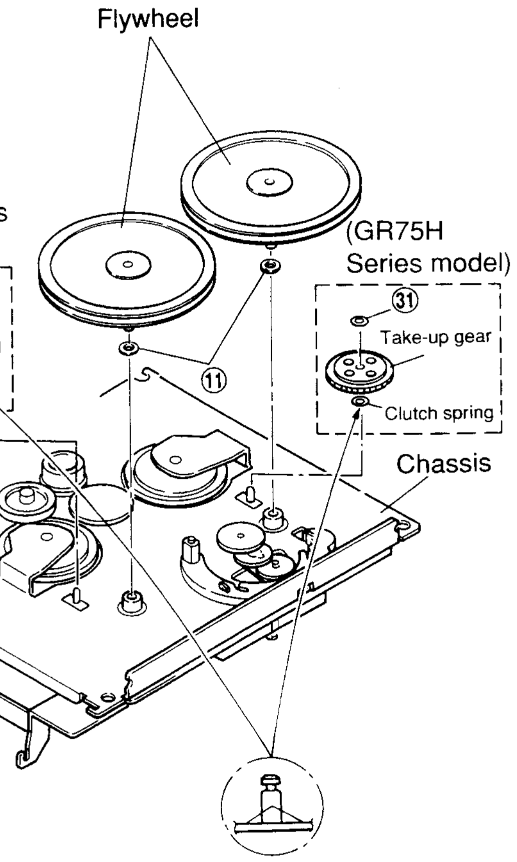

Flywheel
(GR75H Series model)
㉛
Take-up gear
Clutch spring
⑪
(GR75H Series model)
㉛
Take-up gear
Clutch spring
Chassis

Figure 12

f. Replacement of gears

(f-1) Replacement of the reverse idler gear

(1) Remove M1.2 lock washer ⑬, pull it up from the stud of the chassis and remove the gear as shown in Figure 13.

(2) Remount following the removal steps in the reverse order.

(f-2) Replacement of the sun gear

(1) Remove M1.2 lock washer ⑭, pull it up from the stud of the chassis and remove the gear as shown in Figure 13.

(2) Mount it, following the removal steps in the reverse order.

(f-3) Replacement of the fixing gear

(1) Adjust the two mounting claws for the fix gear on the chassis ⑮ and remove the section ⓒ-3 of the gear by pulling it up in the direction of the arrow shown in Figure 13.

(2) Insert the section ⓒ-4 of the new gear into the chassis, and mount it following the removal steps in the reverse order as shown in Figure 13.

(f-4) Replacement of the reverse lever assembly and planet gear

(1) Remove both the fixing gear and the sun gear and remove the reverse lever assembly as shown in Figure 13.

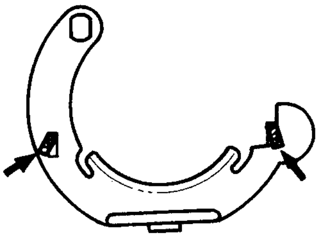
(2) Remove M1.7 lock washer ⑯ and remove the planet gear as shown in Figure 14.

(3) Mount the new planet gear and reverse lever following the removal steps in the reverse order.

Notes on f-1 through f-4:

After mounting all parts, check if the reverse lever moves in the directions marked ⓒ-5 when the reverse gear is turned clockwise and counterclockwise.

*After mounting the fixing gear, bend the claws ⑮ into the form of as shown in the Figure.



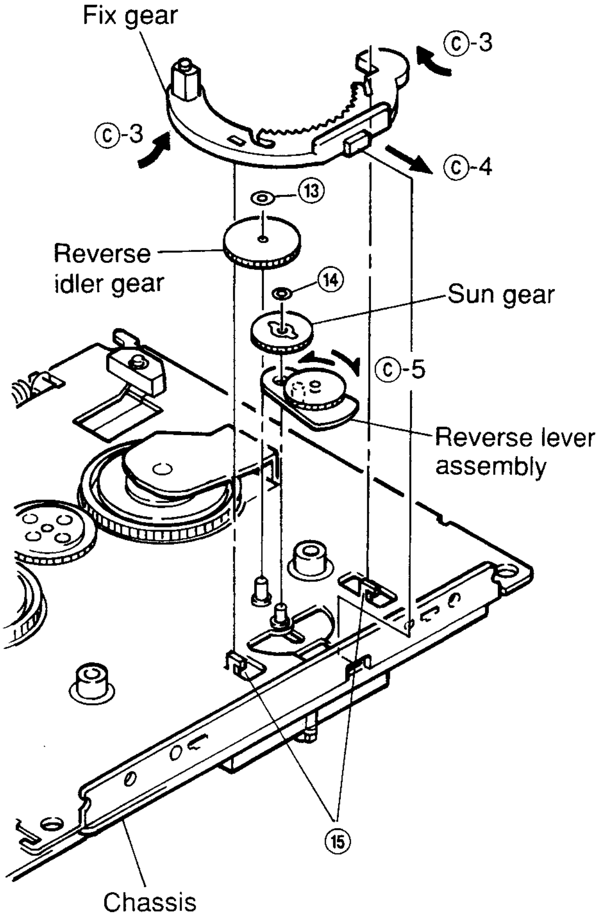


Figure 13

(f-5) Replacement of the clutch lever assembly and eject idler gear

(1) After removing the motor, remove the motor idler gear and the motor idler gear (B) and remove the clutch lever assembly as shown in Figure 10.
(2) Remove M1.2 lock washer ⑰ and remove the eject idler gear as shown in Figure 15.
(3) Mount the new gears and clutch lever following the removal steps in the reverse order.

Note: When mounting the gears to the lever, apply grease (PG-671) to the position Ⓒ-6 as shown in Figure 15. Align the position Ⓒ-7 with the position Ⓒ-8 and mount the clutch lever as shown in Figures 10 and 15.

(f-6) Replacement of the pause gear

(1) Remove M1.2 lock washer ⑱ and remove the pause gear pulling it up from the stud of the chassis as shown in Figure 10.
(2) Mount the new gear following the removal steps in the reverse order.

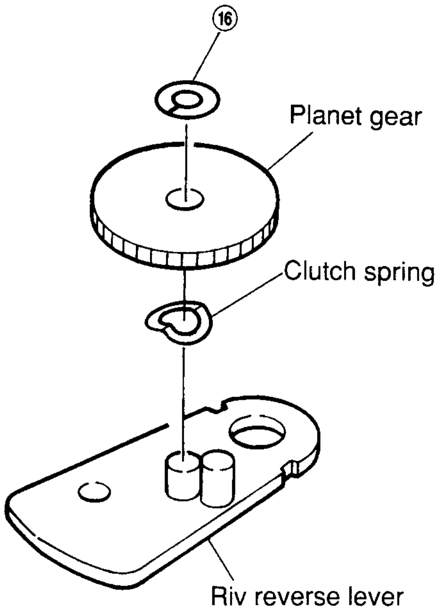
(f-7) Replacement of the pause idler gear (B)

(1) After removing the motor and the motor idler gear, remove M1.2 lock washer ⑲ and remove the gear by pulling it up from the stud of the chassis as shown in Figure 10.
(2) Mount the new gear by following the removal steps in the reverse order.

(f-8) Replacement of the take-up gear

(1) After removing the belt and the pulley idler gear, remove M1.2 lock washer ⑳ by pulling it up from the stud of the riv take-up lever assembly as shown in Figure 10. [For GR75E Series, GR75L Series, GR-Y Series models]
After removing the Flywheel, remove M1.2 lock washer ㉛ and remove the gear by pulling it up from the stud of the chassis as shown in figure 12. [For GR75H Series model]
(2) Remount the take-up gear following the removal steps in the reverse order.

Notes on f:
Do not reus e the used washers. Take care to avoid damage by piercing and tearing.



[Disassembly Reverse Lever Assembly]

Figure 14

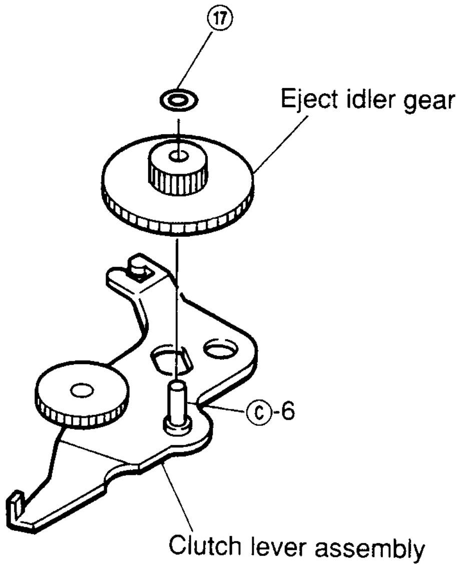


Figure 15

4. Replacement of the parts mounted on the front of the main chassis

a. Replacement of the audio P.C. board
(Except GR75H110)

(1) Remove two solders ㉑ and remove the parallel wire (7P) and the head P.C. board as shown in Figure 16.
(2) Adjust the two claws ㉒ to the rectangular holes on the P.C. board and remove the P.C. board as shown in Figure 16.
(3) After replacement, mount the new P.C. board following the removal steps in the reverse order.

Note: The head P.C. board and the parallel wire are easily damaged. Handle them with care. Refer to Item 2-C to make sure that the temperature of the soldering iron and the soldering time are proper. Do not bring the soldering iron near the head P.C. board.

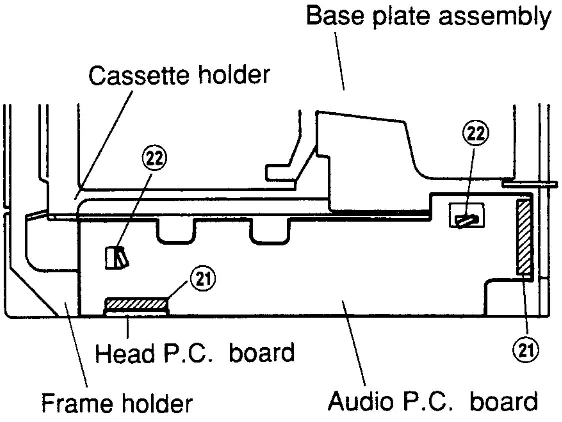

Base plate assembly
Cassette holder
㉒
㉒
㉑
Head P.C. board
㉑
Frame holder
Audio P.C. board

Figure 16

b. Replacement of the control P.C. board

(1) Remove seven solders ⑧ and remove the three parallel wires and the wires of the eject solenoid and of the play solenoid as shown in Figure 11.
(2) Remove five claws ㉓ and remove the P.C. board as shown in Figure 11. [For GR75E Series model] Remove four claws ㉓ and remove the P.C. board as shown in Figure 11. [For GR75L Series, GR-Y Series, GR75H Series models]
(3) After replacing the old P.C. board with a new one, mount it following the removal steps in the reverse order.

Note: As mentioned in Item 4-a, handle the parallel wires carefully, and be sure that the temperature of the soldering iron and the soldering time are proper. As the wires of the eject solenoid are not insulated, do not let them cross each other.

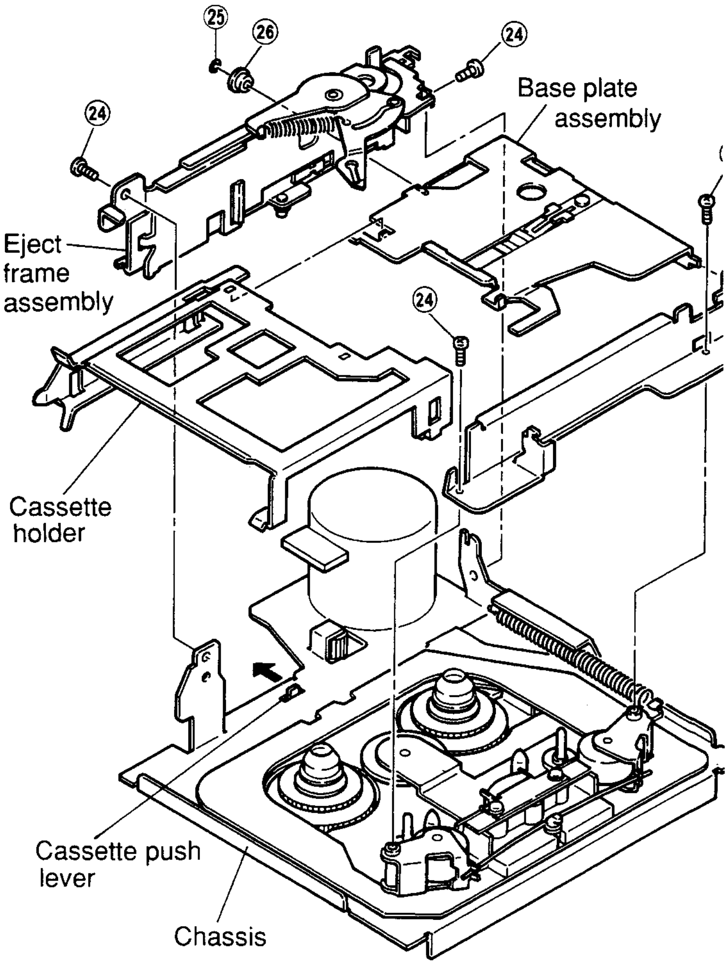

㉕
㉖
㉔
㉔
Base plate assembly
Eject frame assembly
㉔
Cassette holder
Cassette push lever
Chassis

Figure 17

c. Disassembly and assembly of the cassette holder

(1) Remove four screws ㉔ and remove the eject frame assembly and the frame holder as shown in Figure 17.

(2) Remove M1.2 lock washer ㉕ and plate base roller ㉖ and remove the cassette holder and the base plate assembly as shown in Figure 17.

(3) Remount them following the removal steps in the reverse order.

Notes:

1. When mounting the cassette holder and the base plate, insert the slider shaft into the eject arm and fix them turning the slider shaft in the direction indicated by the arrow in the figure. Make sure that the cassette holder and the base plate are in the cassette-in mode during this operation. (Refer to Figure 18).
2. When mounting the eject frame assembly, push the cassette push lever in the direction indicated by the arrow in the Figure 17.
3. When mounting the base plate assembly and the eject frame assembly, or when mounting the eject frame assembly to the chassis, do not apply excessive force to avoid deformations of the eject arm and the frame.
4. Do not reuse the used washers. Take care to avoid damage by piercing and tearing.

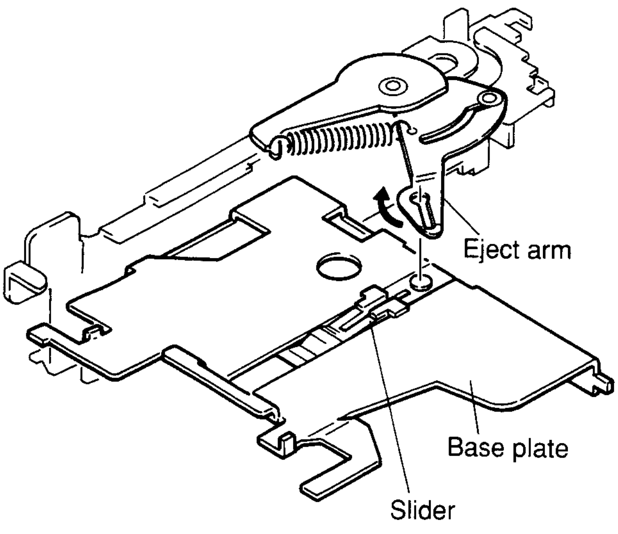


Figure 18

d. Replacement of the reels

(1) Remove M1.7 two lock washers ㉖ (Refer to figure 19).

(2) Move the select lever in the direction marked Ⓓ-1 in the Figure and remove the reel by gripping the reel gear as shown in Figure 19.

(3) After replacement, mount the new reels following the removal steps in the reverse order.

(4) After mounting, check the tape speed and the wow and flutter with test tape MTT-111.

Note: Since the reel is easily loosened if the cap is gripped, always handle it gripping the gear. Do not reuse the used washers. Take care to avoid damage by piercing and tearing.

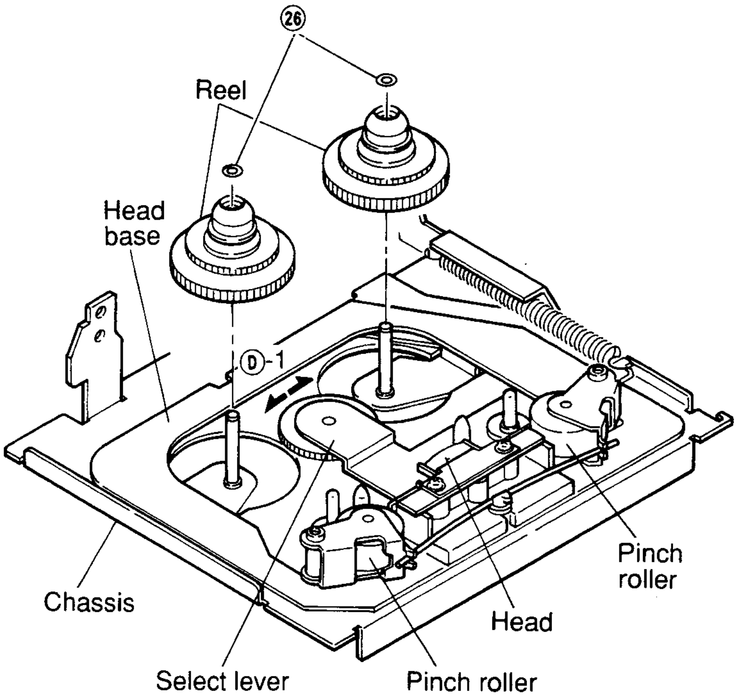


Figure 19

e. Replacement of the pinch rollers

(1) Remove pinch roller spring ㉗ as shown in Figure 20.

(2) Remove M3.1 two lock washers ㉘ and remove the pinch roller as shown in Figure 20.

(3) Mount the pinch rollers following the removal steps in the reverse order.
Apply insulation coating to the position Ⓓ-2 of the pinch roller as shown in Figure 20.

Note: Make sure that the pinch rollers are thoroughly fixed and that they are not deformed. Do not reuse used lock washers. Take care to avoid damage by piercing and tearing.

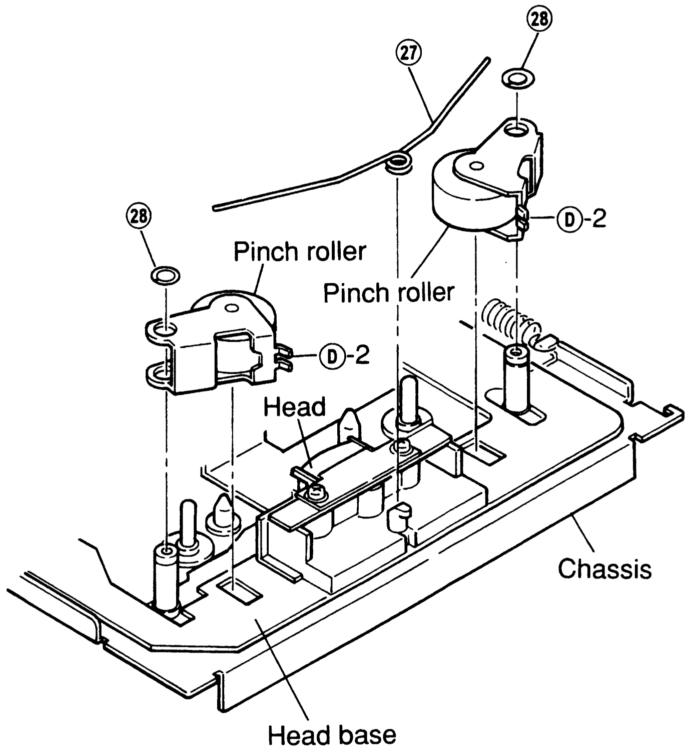

㉘
㉗
㉘
Pinch roller
Pinch roller
Ⓓ-2
Ⓓ-2
Head
Chassis
Head base

Figure 20

f. Replacement of the head

(1) After removing the pinch roller spring, remove two screws ㉙ as shown in Figure 21.

(2) Remove solder ㉚ and remove the head from the head P.C. board as shown in Figure 22.

(3) After replacement, mount the new head following the removal steps in the reverse order.

Notes: 1. Refer to Item 2-C to make sure that the temperature of the soldering iron and the soldering time are proper. Do not bring the soldering iron near the head P.C. board. Make sure that the head P.C. board is not lifted.

2. Fasten the two screws with a fastening torque of 2.3 kg.cm. Note that the tension of the head spring can be decreased if the screws are fastened too strongly.

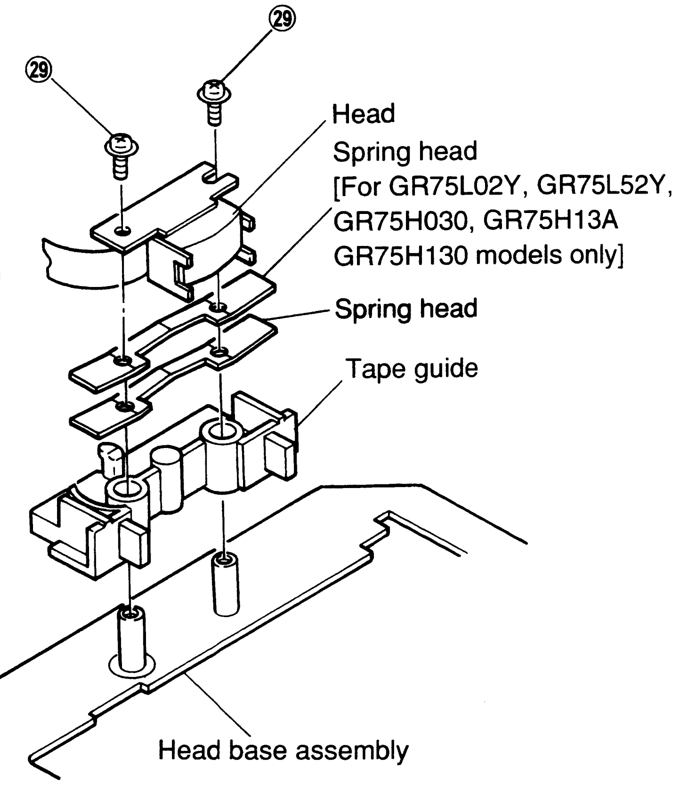

㉙
㉙
Head
Spring head
[For GR75L02Y, GR75L52Y, GR75H030, GR75H13A GR75H130 models only]
Spring head
Tape guide
Head base assembly

Figure 21

(4) Adjust the height of the head as shown in Figures 23, 24 and 25.

① Place the height adjustment gauge (AI-500) on the head base, and adjust the height so that the check bar fits in the tape head guide smoothly.

② When the check bar touches the top (or bottom) of the tape guide, insert a spacer (t 0.1 mm or polislider washer t 0.13 mm).
If necessary, remove the spacer.

Note: If you do not have a height gauge like described in (4)-①, run the tape at normal speed and adjust the height of the head and the tape head guide so that the tape does not curl.

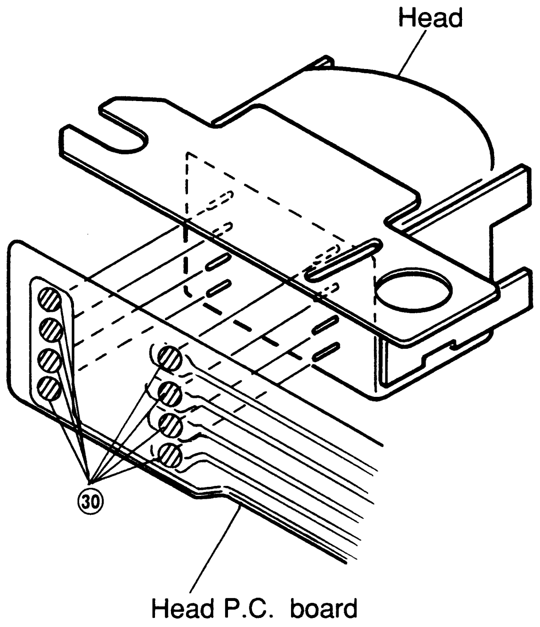

Head
㉚
Head P.C. board

Figure 22

(5) After having assembled the complete mechanism, adjust the angle of the head with test tape MTT-113C. (Refer to chapter "Adjustment of the head angle".) After the adjustment, apply the screw lock and fix the screws.

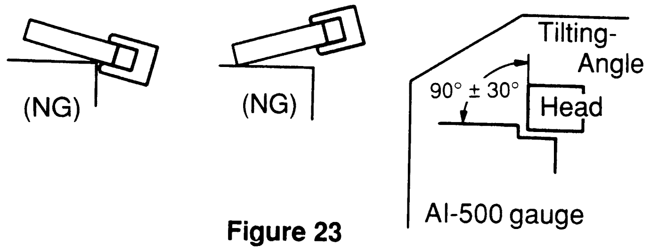

(NG)
(NG)
Tilting-Angle
90° ± 30°
Head
AI-500 gauge

Figure 23

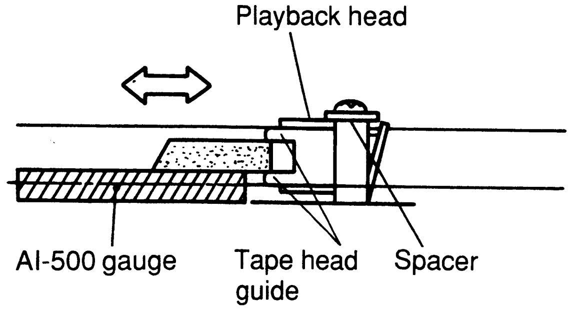
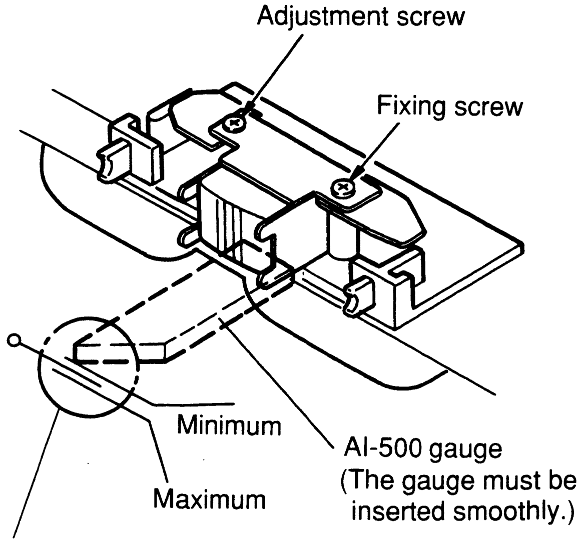

Playback head
AI-500 gauge
Tape head guide
Spacer

Figure 24

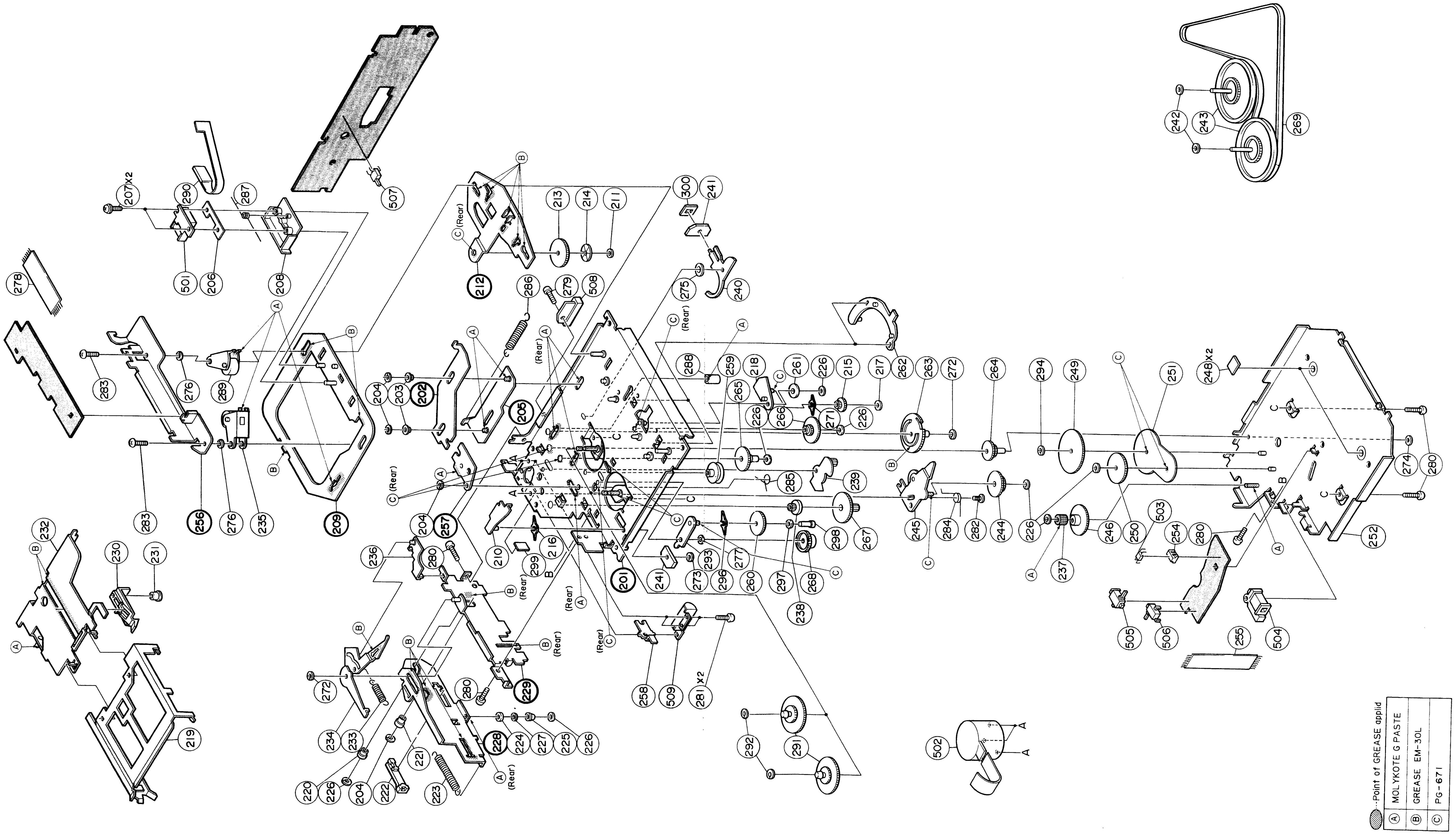

Adjustment screw
Fixing screw
Minimum
Maximum
AI-500 gauge
(The gauge must be inserted smoothly.)

The nosepiece of the gauge must be between the minimum and maximum positions.

Figure 25

Exploded View (GR75E Series) (1/4)

● For GR75E010/01A/020 Models


507
290
207 X2
287
278
501
206
208
B
C (Rear)
213
214
211
300
241
212
286
279
508
275
240
A
283
276
289
B
204
203
202
205
(Rear)
A
C (Rear)
A
288
259
218
261
226
215
217
262
263
272
264
294
249
C
251
248 X2
265
226
266
271
226
283
256
276
235
209
C (Rear)
204
257
285
239
245
284
282
244
226
246
250
503
254
280
274
280
252
232
230
231
236
280
210
299
216
B
201
241
273
293
296
277
260
297
238
268
298
267
C
A
237
505
506
255
504
242
243
269
219
272
234
233
220
226
204
222
221
223
228
224
227
225
226
229
280
B (Rear)
A (Rear)
(Rear) C
258
509
281 X2
292
291
502
A
A

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Ⓐ	MOLYKOTE G PASTE
Ⓑ	GREASE EM-30L
Ⓒ	PG-671

Cassette Deck Assembly Parts List (GR75E Series) (1/4)

Symbol No.	IN-dex	Part No.	Description
203	3-C	43A11072W01	Roller, Sub Head
204		04B41345P01	Washer, Lock(M1.2)
206	2-B	41A31756W01	Spring, Head
207	2-B	03S40019G03	Screw, F-Locks(M2x4)
208	2-B	43B12545W01	Tape, Guide
210	4-C	01A10206W01	Assy., Riv Lever R/F Sol
211	2-D	04B41345P29	Washer, Lock(M2.6)
213	2-D	44A10295W01	Gear, Sensor
214	2-D	14A10681W01	Reflector
215	3-E	44A30480W01	Gear, Planet
216	3-E	41A10097W02	Spring, Clutch
217	3-E	04B41345P35	Washer, Lock(M1.7)
218	3-E	01A30824W01	Assy., Riv Lever Reverse
● 219	4-B	07B40283W01	Holder, Cassette
■ 219	4-B	07B40283W01	Holder, Cassette
▲ 219	4-B	07B10074W01	Holder, Cassette
220	5-B	43A12583W01	Roller, Eject
221	5-C	43A63281F01	Roller, Plate Base
222	5-C	44A82206F01	Rack
223	5-C	41B10386W03	Spring, GR(Rack)
224	4-C	43A10121W01	Roller, Eject A
225	4-D	43A10360W01	Roller, Eject B
226		04B41345P11	Washer, Lock(M1.2)
227	4-D	43A12377W01	Roller, Eject C
230	4-A	45B10376W01	Slider
231	4-B	47A63278F01	Shaft, Slider
232	4-A	01A10212W01	Assy.,Riv Plate Base
233	4-C	41B10386W01	Spring, Eject Arm
234	4-B	01A10148W01	Assy., Riv Eject Arm A
235	3-B	01B30863W02	Assy., Pinch Roller
236	4-C	45A10087W01	Lever Pack In SW
237	4-F	44A12975W01	Pinion, Eject
238	4-E	44A13617W01	Gear, Motor Idler(B)
239	3-E	01A10201W02	Assy., Riv Lever Pause
240	2-D	45A40725W01	Lever, Play Sol
241		76T10374W01	Chip
242	1-G	04S40075G05	Washer Polyslider(M2.1)
243	1-G	01A10368W01	Assy., Flywheel
244	3-F	44A10141W01	Gear, Eject Idler
245	3-E	01A10205W02	Assy., Riv Lever Clutch A

Notes:● ; For GR75E020 model only ■ ; For GR75E010 model only
▲ ; For GR75E01A model only Others ; Common

Note : The parts without parts list are not supplied.

Symbol No.	IN-dex	Part No.	Description
246	3-F	44A10145W01	Gear, Eject
248	3-G	43A41656W01	Spacer, UHMW
249	3-F	44A11063W01	Gear, Bottom A
250	3-F	44A11064W01	Gear, Bottom B
251	3-G	34A11122W02	Washer, GR
252	3-H	01A10210W02	Assy., Riv. Cover Bottom
254	3-G	15B11065W01	Guide, Photo
255	4-G	30T15126W01	Wire, PC Sensor(7P)
258	4-D	45A10101W01	Lever, Eject Sol
259	3-D	49A10131W01	Pulley, Idler
260	4-E	44A10133W01	Gear, Take Up
261	3-E	44A10134W01	Gear, Sun
262	3-E	44B10135W01	Gear, Fix
263	3-E	44B30484W01	Gear, Pause
264	3-F	44A10137W01	Gear, Pause Idler A
265	3-D	44A10379W01	Gear, Pause Idler B
266	3-E	44A10138W01	Gear, Reverse Idler
267	3-E	44A10139W01	Gear, Motor Idler
268	4-E	44A11062W01	Gear, Reel Idler
269	1-G	42A10380W01	Belt, GR
271	3-E	41A30475W01	Spring, Clutch
272		04B41345P15	Washer, Lock(M1.2)
273	4-D	04B41345P02	Washer, Lock(M1.7)
274	3-H	04B41345P17	Washer, Lock(M1)
275	2-D	04B41345P30	Washer, Lock(M3.1)
276		04B41345P32	Washer, Lock(M3.1)
277	4-E	04B41345P37	Washer, Lock(M2.1)
278	2-A	30T15126W02	Wire, PC Joint 7P
279	2-D	03S44205G78	Screw, Pan(M2x6)
280		03S44205G30	Screw, Pan(M2.6x4)
281	4-D	03S72235F53	Screw, Pan(M2x3.3)
282	3-F	03A12132W02	Screw, Eject Clutch(M2x2.3)
283		03S43997P64	Screw, Pan(M1.7x3)
284	3-F	41A10384W01	Spring, Eject Clutch
285	3-E	41A10385W01	Spring, Cas Push
286	2-C	41B10386W02	Spring, Sub Head
287	2-B	41A10387W01	Spring, Pinch Roller
288	3-D	43A12719W01	Roller, Pause
289	3-B	01B30863W01	Assy., Pinch Roller
290	2-B	84T25151W01	Head P.C. Board

Symbol No.	IN-dex	Part No.	Description
291	4-E	01T35403W01	Assy., Reel
292	4-E	04B41345P12	Washer, Lock(M1.7)
293	4-D	01A30161W01	Assy., Riv Lever Take Up
294	3-F	04B41345P34	Washer Lock(M1.2)
296	4-D	41A40910W01	Spring, Clutch
297	4-E	43A41543W01	Washer, Som(M1.2)
298	3-E	47A41458W01	Pin, Take Up
299	4-C	43A40388W01	Spacer, Polyslider
300	2-D	43A41744W01	Lock, Solenoid
Miscellaneous			
● 501	2-B	88T15971W01	Head
■ 501	2-B	88T10373W01	Head
▲ 501	2-B	88T10373W01	Head
502	4-E	01V11500W64	Assy., Motor(Main, 13.2V-80mA)
503	3-G	51T15144W01	Sensor, Photo
504	4-G	01T10371W01	R/F Sol. Assy.
505	4-F	40T15382W01	SW., Detector(Pack Down)
506	4-G	40T15382W01	SW., Detector(Metal)
507	2-C	40T15222W01	SW., Detector (Pack In)
508	2-D	01T15249W01	Assy., Play Solenoid
509	4-D	01T10369W02	Assy., Eject Solenoid

Notes:● ; For GR75E020 model only ■ ; For GR75E010 model only
▲ ; For GR75E01A model only Others ; Common

Exploded View (GR75L Series) (2/4)

- For GR75L020/02A Models

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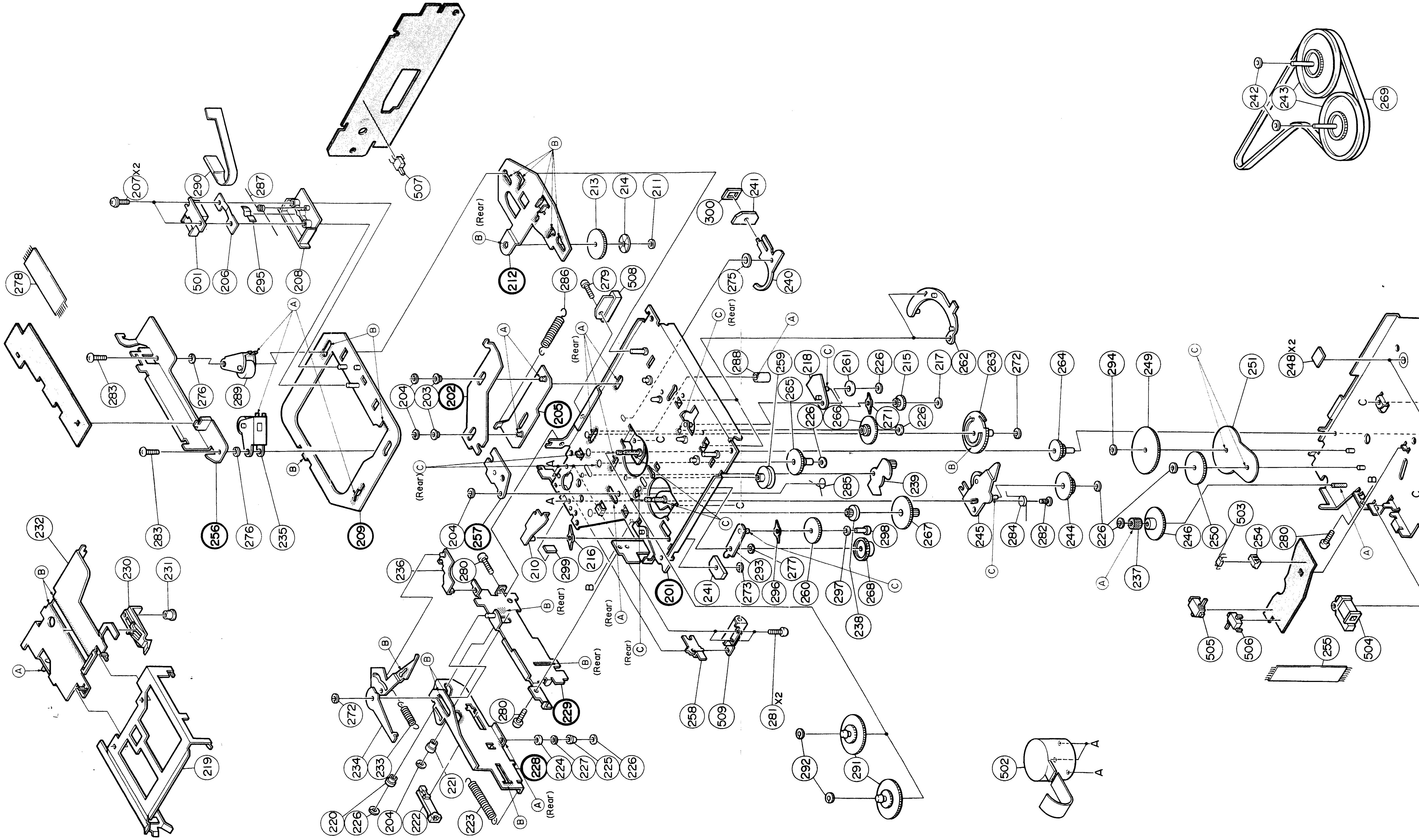
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(Rear)
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Ⓒ	PG-671

A B C D E F G H

Cassette Deck Assembly Parts List (GR75L Series) (2/4)

Note : The parts without parts list are not supplied.

Symbol No.	IN-dex	Part No.	Description
203	3-C	43A11072W01	Roll, Sub Head
204		04B41345P01	Washer, Lock(M1.2)
206	2-B	41A31756W01	Spring, Head
207	2-B	03S40019G03	Screw, F-Locks(M2x4)
208	2-B	43B12545W01	Tape, Guide
210	4-C	01A10206W01	Assy., Riv Lever R/F Sol.
211	2-D	04B41345P29	Washer, Lock(M2.6)
213	2-D	44A10295W01	Gear, Sensor
214	2-D	14A10681W01	Reflector
215	3-E	44A30480W01	Gear, Planet
216	3-E	41A10097W02	Spring, Clutch
217	3-E	04B41345P35	Washer, Lock(M1.7)
218	3-E	01A30824W01	Assy., Riv Lever Reverse
219	4-B	07B40283W01	Holder, Cassette
220	5-B	43A12583W01	Roller, Eject
221	5-C	43A63281F01	Roller, Plate Base
222	5-C	44A82206F01	Rack
223	5-C	41B10386W03	Spring, GR(Rack)
224	4-C	43A10121W01	Roller, Eject(A)
225	4-D	43A10360W01	Roller, Eject(B)
226		04B41345P11	Washer, Lock(M1.2)
227	4-D	43A12377W01	Roller, Eject(C)
230	4-A	45B10376W01	Slider
231	4-B	47A63278F01	Shaft, Slider
232	4-A	01A10212W01	Assy., Riv Plate Base
233	4-C	41B10386W01	Spring, Eject Arm
234	4-B	01A21754W01	Assy., Riv Eject Arm(A)
235	3-B	01B30863W02	Assy., Pinch Roller
236	4-C	45A10087W01	Lever, Pack In SW.
237	4-F	44A20314W01	Pinion, Eject
238	4-E	44A13617W01	Gear, Motor Idler(B)
239	3-E	01A10201W02	Assy., Riv Lever Pause
240	2-E	45A40725W01	Lever, Play Sol
241		76T10374W01	Chip
242	1-G	04S40075G05	Washer, Polyslider(M2.1)
243	1-G	01A10368W01	Assy., Flywheel
244	3-F	44A10141W01	Gear, Eject Idler
245	3-E	01A10205W02	Assy., Riv Lever Clutch(A)
246	3-F	44A10145W01	Gear, Eject
248	3-G	43A41656W01	Spacer, UHMW
249	3-F	44A11063W01	Gear, Bottom(A)
250	3-F	44A11064W01	Gear, Bottom(B)
251	3-G	34A11122W02	Washer, GR
252	3-H	01A10210W02	Assy., Riv. Cover Bottom
254	3-G	15B11065W01	Guide, Photo
255	4-G	30T15126W01	Wire, PC Sensor(7P)
258	4-D	45A10101W01	Lever, Eject Sol.
259	3-D	49A10131W01	Pulley, Idler
260	4-E	44A10133W01	Gear, Take Up
261	3-E	44A10134W01	Gear, Sun
262	3-E	44B10135W01	Gear, Fix
263	3-E	44B21670W01	Gear, Pause
264	3-F	44A10137W01	Gear, Pause Idler(A)
265	3-D	44A10379W01	Gear, Pause Idler(B)
266	3-E	44A10138W01	Gear, Reverse Idler
267	3-E	44A10139W01	Gear, Motor Idler
268	4-E	44A11062W01	Gear, Reel Idler
269	1-G	42A10380W01	Belt, GR
271	3-E	41A30475W01	Spring, Clutch
272	3-F	04B41345P15	Washer, Lock(M1.2)
273	4-D	04B41345P02	Washer, Lock(M1.7)
274	3-H	04B41345P17	Washer, Lock(M1)
275	2-D	04B41345P30	Washer, Lock(M3.1)
276		04B41345P32	Washer, Lock(M3.1)
277	4-E	04B41345P37	Washer, Lock(M2.1)
278	2-A	30T15126W02	Wire, PC Joint 7P
279	2-D	03S44205G78	Screw, Pan(M2x6)
280		03S44205G30	Screw, Pan(M2.6x4)
281	4-D	03S72235F53	Screw, Pan(M2x3.3)
282	3-F	03A12132W02	Screw, Eject Clutch(M2x2.3)
283		03S43997P64	Screw, Pan(M1.7x3)
284	3-F	41A10384W01	Spring, Eject Clutch
285	3-E	41A10385W01	Spring, Cas. Push
286	2-C	41B10386W02	Spring, Sub Head
287	2-B	41A10387W01	Spring, Pinch Roller
288	3-D	43A12719W01	Roller, Pause
289	3-B	01B30863W01	Assy., Pinch Roller
290	2-B	84T25151W01	Head P.C. Board
291	4-E	01T35403W02	Assy., Reel
292	4-E	04B41345P12	Washer, Lock(M1.7)

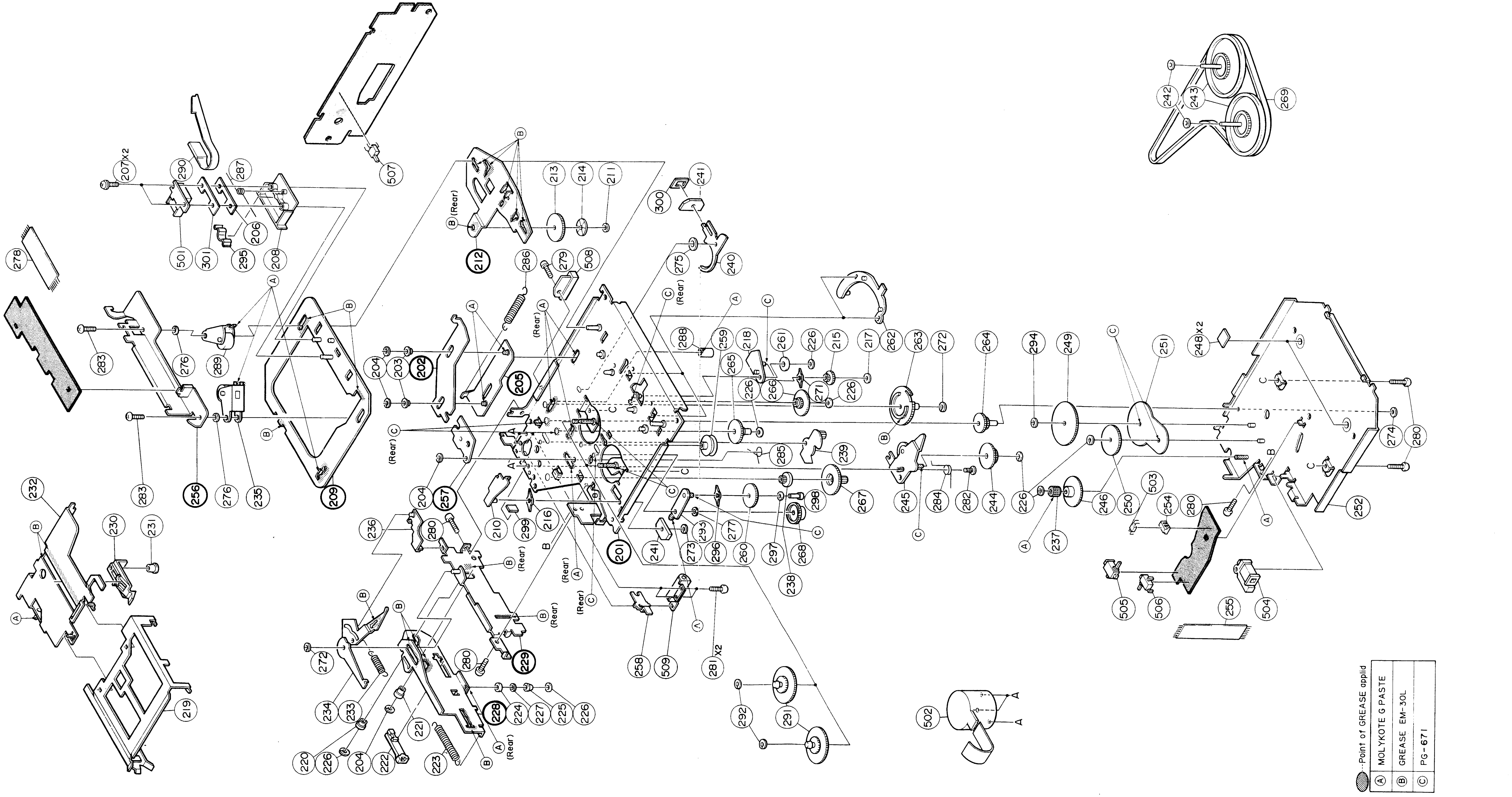
Notes : ◆ ; For GR75L020 model only ○ ; For GR75L02A model only
Others ; Common

Symbol No.	IN-dex	Part No.	Description
293	4-D	01A30161W01	Assy., Riv Lever Take Up
294	3-F	04B41345P34	Washer, Lock(M1.2)
295	2-B	26A20537W01	Shield, Plate
296	4-D	41A40910W01	Spring, Clutch
297	4-E	43A41543W01	Washer, Som(M1.2)
298	3-E	47A41458W01	Pin, Take Up
299	3-D	43A40388W01	Spacer, Polyslider
300	2-D	43A41744W01	Lock, Solenoid
Miscellaneous			
501	2-B	88T15971W01	Head
◆ 502	4-E	01V23900W60	Assy., Motor(13.2V-105mA)
○ 502	4-E	01V43400W37	Assy., Motor(13.2V-88mA)
503	3-G	51T15144W01	Sensor, Photo
504	4-G	01T10371W01	R/F Sol. Assy
505	4-F	40T15382W01	SW., Detector (Pack Down)
506	4-G	40T15382W01	SW., Detector (Metal)
507	2-C	40T15222W01	SW., Detector (Pack In)
508	2-D	01T15249W01	Assy., Play Solenoid
509	4-D	01T10369W02	Assy., Eject Solenoid

Notes : ◆ ; For GR75L020 model only ○ ; For GR75L02A model only
Others ; Common

Exploded View (GR-Y Series) (3/4)

- **For GR75L02Y/52Y Model**


207x2
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501
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B (Rear)
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202
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(Rear) A
(Rear) C
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204
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(Rear)
258
509
281x2
292
291
502
A
B
C
Point of GREASE applid
Ⓐ MOLYKOTE G PASTE
Ⓑ GREASE EM-30L
Ⓒ PG-671

Cassette Deck Assembly Parts List (GR-Y Series) (3/4)

Note : The parts without parts list are not supplied.

Symbol No.	IN-dex	Part No.	Description
203	3-C	43A11072W01	Roll, Sub Head
204		04B41345P01	Washer, Lock(M1.2)
206	2-B	41A31756W01	Spring, Head
207	2-B	03S40019G03	Screw, F-Locks(M2x4)
208	2-B	43B12545W01	Tape, Guide
210	4-C	01A10206W01	Assy., Riv Lever R/F Sol.
211	2-D	04B41345P29	Washer, Lock(M2.6)
213	2-D	44A10295W01	Gear, Sensor
214	2-D	14A10681W01	Reflector
215	3-E	44A30480W01	Gear, Planet
216		41A10097W02	Spring, Clutch
217	3-E	04B41345P35	Washer, Lock(M1.7)
218	3-E	01A30824W01	Assy., Riv Lever Reverse
219	4-B	07B40283W01	Holder, Cassette
220	5-B	43A12583W01	Roller, Eject
221	5-C	43A63281F01	Roller, Plate Base
222	5-C	44A82206F01	Rack
223	5-C	41B10386W03	Spring, GR(Rack)
224	4-C	43A10121W01	Roller, Eject(A)
225	4-D	43A10360W01	Roller, Eject(B)
226		04B41345P11	Washer, Lock(M1.2)
227	4-D	43A12377W01	Roller, Eject(C)
230	4-A	45B10376W01	Slider
231	4-B	47A63278F01	Shaft, Slider
232	4-A	01A10212W01	Assy., Riv Plate Base
233	4-C	41B10386W01	Spring, Eject Arm
234	4-B	01A21754W01	Assy., Riv Eject Arm(A)
235	3-B	01B30863W02	Assy., Pinch Roller
236	4-C	45A10087W01	Lever, Pack In SW.
237	4-F	44A20314W01	Pinion, Eject
238	4-E	44A13617W01	Gear, Motor Idler(B)
239	3-E	01A10201W02	Assy., Riv Lever Pause
240	2-D	45A40725W01	Lever, Play Sol.
241		76T10374W01	Chip
242	1-G	04S40075G05	Washer, Polyslider(M2.1)
243	1-G	01A10368W01	Assy., Flywheel
244	3-F	44A10141W01	Gear, Eject Idler
245	3-E	01A10205W02	Assy., Riv Lever Clutch(A)
246	3-F	44A10145W01	Gear, Eject
248	3-G	43A41656W01	Spacer, UHMW
249	3-F	44A11063W01	Gear, Bottom(A)
250	3-F	44A11064W01	Gear, Bottom(B)
251	3-G	34A11122W02	Washer, GR
252	3-H	01A10210W02	Assy., Riv. Cover Bottom
254	3-G	15B11065W01	Guide, Photo
255	4-G	30T15126W01	Wire, PC Sensor(7P)
258	4-D	45A10101W01	Lever, Eject Sol.
259	3-D	49A10131W01	Pulley, Idler
260	4-E	44A10133W01	Gear, Take Up
261	3-E	44A10134W01	Gear, Sun
262	3-E	44B10135W01	Gear, Fix
263	3-E	44B21670W01	Gear, Pause
264	3-F	44A10137W01	Gear, Pause Idler(A)
265	3-D	44A10379W01	Gear, Pause Idler(B)
266	3-E	44A10138W01	Gear, Reverse Idler
267	3-E	44A10139W01	Gear, Motor Idler
268	4-E	44A11062W01	Gear, Reel Idler
269	1-G	42A10380W01	Belt, GR
271	3-E	41A30475W01	Spring, Clutch
272	3-F	04B41345P15	Washer, Lock(M1.2)
273		04B41345P02	Washer, Lock(M1.7)
274	3-H	04B41345P17	Washer, Lock(M1)
275	2-D	04B41345P30	Washer, Lock(M3.1)
276	3-B	04B41345P32	Washer, Lock(M3.1)
277	4-E	04B41345P37	Washer, Lock(M2.1)
278	2-A	30T15126W02	Wire, PC Joint 7P
279	2-D	03S44205G78	Screw, Pan(M2x6)
280		03S44205G30	Screw, Pan(M2.6x4)
281	4-D	03S72235F53	Screw, Pan(M2x3.3)
282	3-F	03A12132W02	Screw, Eject Clutch(M2x2.3)
283		03S43997P64	Screw, Pan(M1.7x3)
284	3-F	41A10384W01	Spring, Eject Clutch
285	3-E	41A10385W01	Spring, Cas. Push
286	2-C	41B10386W02	Spring, Sub Head
287	2-B	41A10387W01	Spring, Pinch Roller
288	3-D	43A12719W01	Roller, Pause
289	3-B	01B30863W01	Assy., Pinch Roller
290	2-B	84T35271W01	Head P.C. Board
291	4-E	01T35403W02	Assy., Reel
292	4-E	04B41345P12	Washer, Lock(M1.7)

Notes:☆ ; For GR75L02Y model only ◇ ; For GR75L52Y model only
Others ; Common

Symbol No.	IN-dex	Part No.	Description
293	4-D	01A30161W01	Assy., Riv Lever Take Up
294	3-F	04B41345P34	Washer, Lock(M1.2)
295	2-B	26A20537W01	Shield, Plate
296	4-D	41A40910W01	Spring, Clutch
297	4-E	43A41543W01	Washer, Som(M1.2)
298	3-E	47A41458W01	Pin, Take Up
299	3-C	43A40388W01	Spacer, Polyslider
300	2-D	43A41744W01	Lock, Solenoid
301	2-B	41A41416W01	Spring, Head

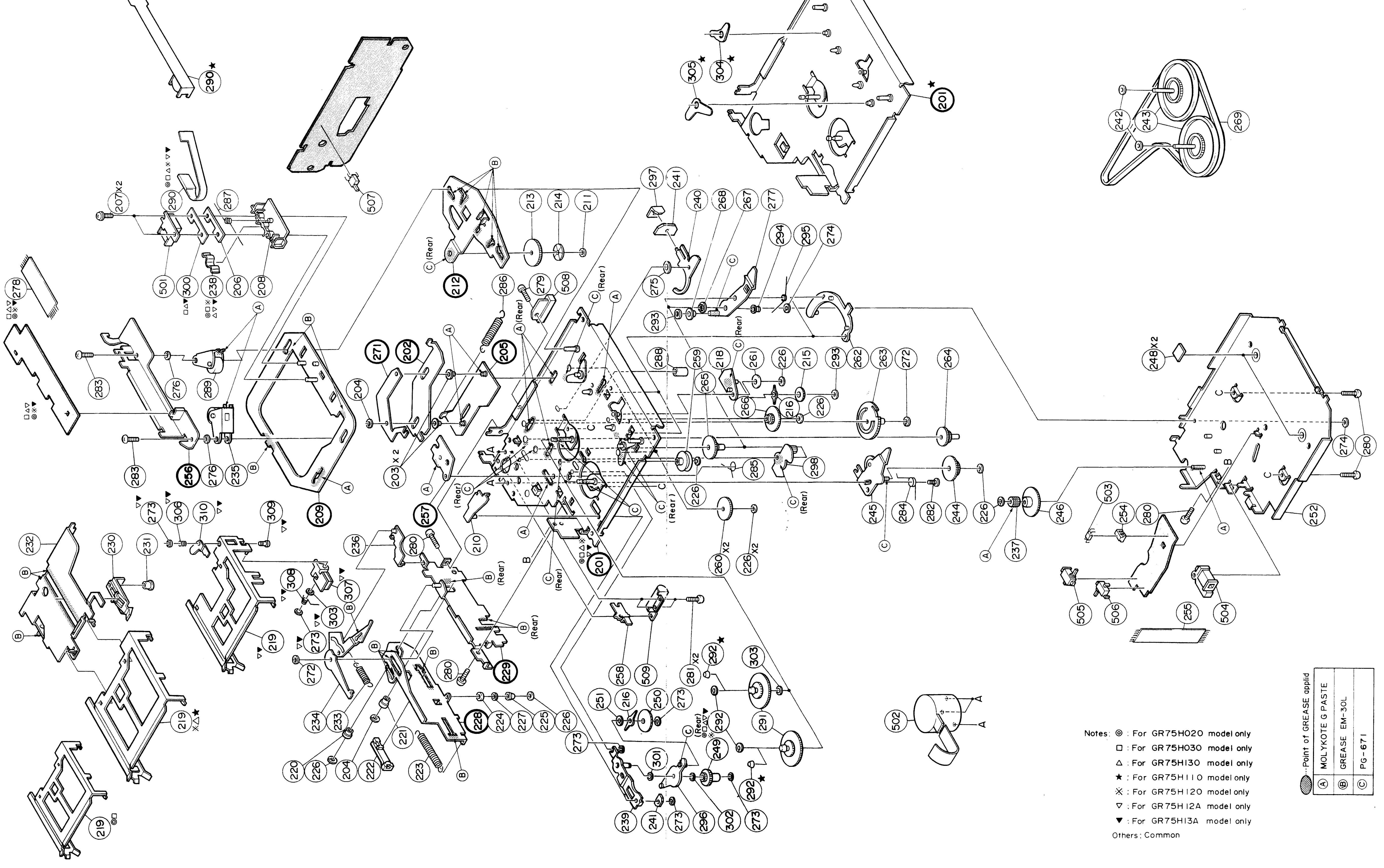
Miscellaneous

Symbol No.	IN-dex	Part No.	Description
501	2-B	88T15971W01	Head
☆ 502	4-E	01V23900W60	Assy., Motor(13.2V-105mA)
◇ 502	4-E	01V44200W73	Assy., Motor(13.2V-80mA)
503	3-G	51T15144W01	Sensor, Photo
504	4-G	01T10371W01	R/F Sol. Assy
505	4-F	40T15382W01	SW., Detector (Pack Down)
506	4-G	40T15382W01	SW., Detector (Metal)
507	2-C	40T15222W01	SW., Detector (Pack In)
508	2-D	01T15249W01	Assy., Play Solenoid
509	4-D	01T10369W02	Assy., Eject Solenoid

Notes:☆ ; For GR75L02Y model only ◇ ; For GR75L52Y model only
Others ; Common

Exploded View (GR75H Series) (4/4)

- **For GR75H030/020/130/110/120/12A/13A Model**


290★
507
305★
304★
201★
242
243
269
207X2
290 ◎□△X▽▼
287
501
300 □△▽▼
238 ◎□X△▽▼
206
208
278 □△▽ ◎X▼
□△▽ ◎X▼
B
213
214
211
C (Rear)
212
286
279
508
297
241
240
268
267
277
294
295
274
C
275
C (Rear)
A
293
283
276
289
A
B
271
202
A
205
A (Rear)
288
259
218
C (Rear)
261
226
215
293
262
263
272
264
248X2
C
204
203 X 2
265
266
216
226
274
280
283
256
276
235
B
209
A
A
C
A
C
C
C (Rear)
285
298
C (Rear)
245
284
282
244
226
237
246
C
503
254
280
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252
273 ▽
306 ▼▽
310 ▼▽
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232
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231
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219 ▽
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257
(Rear)
210
A
B
201 ◎□△X▽▼
C (Rear)
260X2
226X2
A
308 ▼▽
307 ▼▽
303 ▽
B
273 ▼▽
B (Rear)
B (Rear)
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281X2
292★
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C (Rear) ◎□△▼
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502
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219 X△★
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241
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302
292★
273
219 ◎□

Notes: ◎ : For GR75H020 model only
□ : For GR75H030 model only
△ : For GR75H130 model only
★ : For GR75H110 model only
X : For GR75H120 model only
▽ : For GR75H12A model only
▼ : For GR75H13A model only
Others: Common

▨ ···Point of GREASE applid	
Ⓐ	MOLYKOTE G PASTE
Ⓑ	GREASE EM-30L
Ⓒ	PG-671

Cassette Deck Assembly Parts List (GR75H Series) (4/4)

Note : The parts without parts list are not supplied.

Symbol	No.	IN-dex	Part No.	Description
◎	203	3-C	43A51119W01	Roller, Sub Head
□	203	3-C	43A51119W01	Roller, Sub Head
※	203	3-C	43A31453W01	Roller, Sub Head
△	203	3-C	43A31453W01	Roller, Sub Head
▽	203	3-C	43A31453W01	Roller, Sub Head
▼	203	3-C	43A31453W01	Roller, Sub Head
★	203	3-C	43A31453W01	Roller, Sub Head
	204		04B41345P01	Washer, Lock(M1.2)
	206	2-B	41A31756W01	Spring, Head
	207	2-A	03A38021W01	Screw, Flange(M2x4)
	208	2-B	43B12545W01	Tape, Guide
	210	4-C	01A30462W01	Assy., Riv Lever R/F Sol
	211	2-D	04B41345P29	Washer, Lock(M2.6)
	213	2-D	44A10295W01	Gear, Sensor
	214	2-D	14A58039W01	Reflector
	215	3-E	44A30480W01	Gear, Planet
	216		41A30475W01	Spring, Clutch
	218	3-E	01A30824W01	Assy., Riv Lever Reverse
◎	219	5-A	07B40283W01	Holder, Cassette
□	219	5-A	07B40283W01	Holder, Cassette
△	219	5-B	07B40012W01	Holder, Cassette
※	219	5-B	07B40012W01	Holder, Cassette
★	219	5-B	07B40012W01	Holder, Cassette
▽	219	4-B	01A51158W01	Assy., Riv Cassete Holder
▼	219	4-B	01A51158W01	Assy., Riv Cassete Holder
	220	5-B	43A12583W01	Roller, Eject
	221	5-C	43A63281F01	Roller, Plate Base
	222	5-C	44A82206F01	Rack
◎	223	5-C	41B10386W03	Spring, GR(Rack)
□	223	5-C	41B10386W03	Spring, GR(Rack)
△	223	5-C	41B10386W04	Spring, GR(Rack)
★	223	5-C	41B10386W04	Spring, GR(Rack)
※	223	5-C	41B10386W04	Spring, GR(Rack)
▽	223	5-C	41B10386W04	Spring, GR(Rack)
▼	223	5-C	41B10386W04	Spring, GR(Rack)
	224	5-C	43A10121W01	Roller, Eject A
	225	5-D	43A10360W01	Roller, Eject B
	226		04B41345P11	Washer, Lock(M1.2)
	227	5-D	43A12377W01	Roller, Eject C
	230	4-A	45B10376W01	Slider
	231	4-B	47A63278F01	Shaft, Slider
◎	232	4-A	01A10212W01	Assy., Riv Plate Base
□	232	4-A	01A10212W01	Assy., Riv Plate Base
△	232	4-A	01A40024W01	Assy., Riv Plate Base
★	232	4-A	01A40024W01	Assy., Riv Plate Base

Notes:◎ ; For GR75H020 model only　□ ; For GR75H030 model only
▽ ; For GR75H12A model only　△ ; For GR75H130 model only

Symbol	No.	IN-dex	Part No.	Description
※	232	4-A	01A40024W01	Assy., Riv Plate Base
▽	232	4-A	01A40024W01	Assy., Riv Plate Base
▼	232	4-A	01A40024W01	Assy., Riv Plate Base
◎	233	5-C	41B10386W01	Spring, Eject Arm
□	233	5-C	41B10386W01	Spring, Eject Arm
△	233	5-C	41B63283F11	Spring
★	233	5-C	41B63283F11	Spring
※	233	5-C	41B63283F11	Spring
▽	233	5-C	41B63283F11	Spring
▼	233	5-C	41B63283F11	Spring
◎	234	5-C	01A30883W01	Assy., Riv Eject Arm B
□	234	5-C	01A30883W01	Assy., Riv Eject Arm B
△	234	5-C	01A40021W01	Assy., Riv Eject Arm D
★	234	5-C	01A40021W01	Assy., Riv Eject Arm D
※	234	5-C	01A40021W01	Assy., Riv Eject Arm D
▽	234	5-C	01A40021W01	Assy., Riv Eject Arm D
▼	234	5-C	01A40021W01	Assy., Riv Eject Arm D
	235	3-B	01B30863W02	Assy., Pinch Roller
	236	4-C	45A10087W01	Lever Pack In SW
	237	4-F	44A20314W01	Pinion, Eject
◎	238	2-B	26A20537W01	Shield, plate
□	238	2-B	26A20537W01	Shield, plate
※	238	2-B	26A20537W01	Shield, plate
△	238	2-B	26A20537W01	Shield, plate
▽	238	2-B	26A20537W01	Shield, plate
▼	238	2-B	26A20537W01	Shield, plate
	239	5-D	01A40881W01	Assy., Riv RF Link
	240	2-D	45A40725W01	Lever, Play Sol.
	241		76T10374W01	Chip
◎	242	1-G	04S40075G05	Washer, Polyslider(M2.1)
□	242	1-G	04S40075G05	Washer, Polyslider(M2.1)
※	242	1-G	04S40075G05	Washer, Polyslider(M2.1)
△	242	1-G	04S40075G05	Washer, Polyslider(M2.1)
▽	242	1-G	04S40075G05	Washer, Polyslider(M2.1)
▼	242	1-G	04S40075G05	Washer, Polyslider(M2.1)
★	242	1-G	04T55449W01	Washer, Teflon(M2.1)
◎	243	1-G	01A30488W01	Assy., Flywheel
□	243	1-G	01A30488W01	Assy., Flywheel
※	243	1-G	01A30488W01	Assy., Flywheel
△	243	1-G	01A30488W01	Assy., Flywheel
▽	243	1-G	01A30488W01	Assy., Flywheel
▼	243	1-G	01A30488W01	Assy., Flywheel
★	243	1-G	01A50658W01	Assy., Flywheel
	244	3-F	44A10141W01	Gear, Eject Idler
	245	3-E	01A10205W02	Assy., Riv Lever Clutch A

★ ; For GR75H110 model only　※ ; For GR75H120 model only
▼ ; For GR75H13A model only　Others ; Common

Note : The parts without parts list are not supplied.

Symbol No.		IN-dex	Part No.	Description
	246	3-F	44A10145W01	Gear, Eject
	248	3-G	43A41656W01	Spacer, UHMW
	249	5-E	44A30481W01	Gear, RF Idler
	250	4-D	44A30483W01	Gear, RF
	251	4-D	04S40075G58	Washer, Polyslider(M2.1)
	252	3-H	01A30463W01	Assy., Riv. Cover Bottom
	254	3-G	15B11065W01	Guide, Photo
	255	4-G	30T15126W01	Wire, PC Sensor(7P)
	258	4-D	45A10101W01	Lever, Eject Sol
	259	3-D	49A30476W01	Pulley, Idler
	260	4-E	44A30482W01	Gear, Take Up
	261	3-E	44A30478W01	Gear, Sun
◎	262	3-E	44B10135W01	Gear, Fix
□	262	3-E	44B10135W01	Gear, Fix
★	262	3-E	44B10135W01	Gear, Fix
※	262	3-E	44B10135W01	Gear, Fix
△	262	3-E	44B10135W01	Gear, Fix
▼	262	3-E	44B10135W01	Gear, Fix
▽	262	3-E	44B10135W02	Gear, Fix
	263	3-E	44B30484W01	Gear, Pause
	264	3-F	44A10137W01	Gear, Pause Idler A
	265	3-E	44A30486W01	Gear, Pause Idler B
	266	3-E	44A30479W01	Gear, Reverse Idler
	267	2-E	44A30485W01	Gear, Motor Idler
	268	2-E	44A30487W01	Gear, Motor Clutch
	269	1-G	42A31850W01	Belt, GR
	272		04B41345P15	Washer, Lock(M1.2)
	273		04B41345P02	Washer, Lock(M1.7)
	274		04B41345P17	Washer, Lock(M1)
	275	2-D	04B41345P30	Washer, Lock(M3.1)
	276		04B41345P32	Washer, Lock(M3.1)
	277	2-E	01A30464W01	Assy., Riv Play Clutch
◎	278	2-A	30T15126W02	Wire, PC Joint 7P
□	278	2-A	30T15126W02	Wire, PC Joint 7P
※	278	2-A	30T15126W02	Wire, PC Joint 7P
△	278	2-A	30T15126W02	Wire, PC Joint 7P
▽	278	2-A	30T15126W02	Wire, PC Joint 7P
▼	278	2-A	30T15126W02	Wire, PC Joint 7P
	279	2-D	03S44205G78	Screw, Pan(M2x6)
	280		03S44205G30	Screw, Pan(M2.6x4)
	281	4-D	03S72235F53	Screw, Pan(M2x3.3)
	282	3-F	03A12132W02	Screw, Eject Clutch(M2x2.3)
	283		03S43997P64	Screw, Pan(M1.7x3)
	284	3-F	41A10384W01	Spring, Eject Clutch
	285	3-E	41A10385W01	Spring, Cassette Push
	286	2-C	41B10386W02	Spring, Sub Head
	287	2-B	41A10387W01	Spring, Pinch Roller
	288	3-D	43A12719W01	Roller, Pause
	289	3-B	01B30863W01	Assy., Pinch Roller
◎	290	2-B	84T25151W01	Head P.C. Board
※	290	2-B	84T25151W01	Head P.C. Board
▽	290	2-B	84T25151W01	Head P.C. Board
□	290	2-B	84T35271W01	Head P.C. Board
△	290	2-B	84T35271W01	Head P.C. Board
▼	290	2-B	84T35271W01	Head P.C. Board
★	290	1-B	84T45462W01	Head P.C. Board
◎	291	5-E	01T35403W01	Assy., Reel
□	291	5-E	01T35403W01	Assy., Reel
※	291	5-E	01T35403W01	Assy., Reel
△	291	5-E	01T35403W01	Assy., Reel
▽	291	5-E	01T35403W01	Assy., Reel
▼	291	5-E	01T35403W01	Assy., Reel
★	291	5-E	01T45062W01	Assy., Reel
◎	292	5-E	04B41345P12	Washer, Lock(M1.7)
□	292	5-E	04B41345P12	Washer, Lock(M1.7)
※	292	5-E	04B41345P12	Washer, Lock(M1.7)
△	292	5-E	04B41345P12	Washer, Lock(M1.7)
▽	292	5-E	04B41345P12	Washer, Lock(M1.7)
▼	292	5-E	04B41345P12	Washer, Lock(M1.7)
★	292		49A40718W01	Reel, Cap
	293		04B41345P35	Washer, Lock(M1.7)
	294	2-E	43A30827W01	Spacer, Motor Idler
	295	2-E	41A30490W01	Spring, Play Clutch
	296	5-E	01A40882W01	Assy., Riv Lever RF
	297	2-D	43A41744W01	Lock, Solenoid
	298	3-E	01A10201W02	Assy, Riv Lever Pause
□	300	2-B	41A41416W01	Spring, Head
△	300	2-B	41A41416W01	Spring, Head
▼	300	2-B	41A41416W01	Spring, Head
	301	5-D	04S40075G63	Washer, Polyslider(M2.1)
	302	5-E	04S40075G62	Washer, Polyslider(M2.1)
	303		04S40075G05	Washer, Polyslider(M2.1)
★	304	1-E	01A50659W01	Assy., Riv Pinch Roller(N)
★	305	1-E	01A50660W01	Assy., Riv Pinch Roller(R)
▽	306	3-B	41A50970W01	Spring, Push Holder
▼	306	3-B	41A50970W01	Spring, Push Holder
▽	307	4-C	01A51160W01	Assy., Link Felt Guide
▼	307	4-C	01A51160W01	Assy., Link Felt Guide
▽	308	4-B	41A50969W01	Spring, Holder
▼	308	4-B	41A50969W01	Spring, Holder

Notes:◎ ; For GR75H020 model only □ ; For GR75H030 model only ★ ; For GR75H110 model only ※ ; For GR75H120 model only
▽ ; For GR75H12A model only △ ; For GR75H130 model only ▼ ; For GR75H13A model only Others ; Common

Note : The parts without parts list are not supplied.

Symbol	No.	IN-dex	Part No.	Description
▽	309	3-B	46A50946W01	Stud. Holder Cassete
▼	309	3-B	46A50946W01	Stud. Holder Cassete
▽	310	3-B	01A51159W01	Assy., Riv Lever Push Holder
▼	310	3-B	01A51159W01	Assy., Riv Lever Push Holder
				Miscellaneous
◎	501	2-B	88T15971W02	Head
※	501	2-B	88T15971W02	Head
▽	501	2-B	88T15971W02	Head
□	501	2-B	88T35406W01	Head
△	501	2-B	88T35406W01	Head
▼	501	2-B	88T35406W01	Head
★	501	2-B	88T10373W01	Head
◎	502	5-F	01V41100W72	Assy., Motor(11.5v-85mA)
□	502	5-F	01V41100W72	Assy., Motor(11.5v-85mA)
△	502	5-F	01V41100W72	Assy., Motor(11.5v-85mA)
▼	502	5-F	01V41100W72	Assy., Motor(11.5v-85mA)
▽	502	5-F	01V51800W42	Assy., Motor(13.2V-105mA)
※	502	F-5	01V51800W42	Assy., Motor(13.2V-105mA)
★	502	F-5	01V53200W99	Assy., Motor(13.2V-105mA)
	503	3-G	51T15144W01	Sensor, Photo
	504	4-G	01T10371W01	R/F Sol. Assy.
	505	4-F	40T15382W01	SW., Detector(Pack Down)
	506	4-G	40T15382W01	SW., Detector(Metal)
	507	2-C	40T15222W01	SW., Detector(Pack In)
	508	2-D	01T15249W01	Assy., Play Solenoid
	509	4-D	01T10369W02	Assy., Eject Solenoid

Symbol	No.	IN-dex	Part No.	Description

Notes: ◎ ; For GR75H020 model only □ ; For GR75H030 model only
▽ ; For GR75H12A model only △ ; For GR75H130 model only

★ ; For GR75H110 model only ※ ; For GR75H120 model only
▼ ; For GR75H13A model only Others ; Common

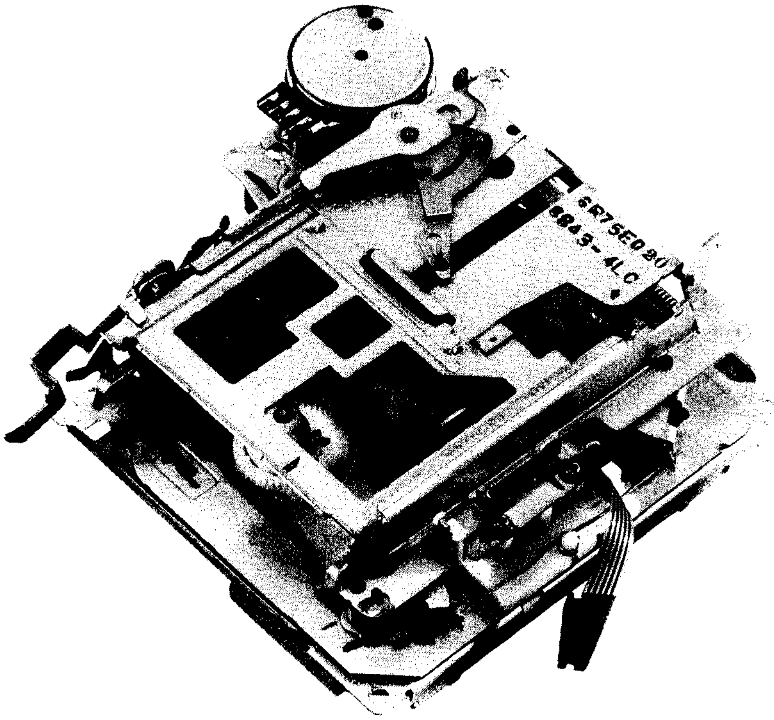
ALPINE®

SERVICE MANUAL

Cassette Deck Mechanism

ADDENDUM & REVISED (VII)

- This manual is described on GR75H12H only. The GR75H12H is developed from GR75H SERIES. For information that is not mentioned in this service manual, refer to the Service Manual • GR/GR-Y SERIES - ADDENDUM & REVISED (VI) (68P20504W07).
- 当マニュアルはGR75H12Hについてのみ記載してます。又、GR75Hシリーズがベースモデルとなってますので、相違部分のみを記載してあります。
詳細については、GR/GR-Yシリーズ (改訂・追補版 - VI) (68P20505W07)を参照願います。



GR/GR-Y SERIES

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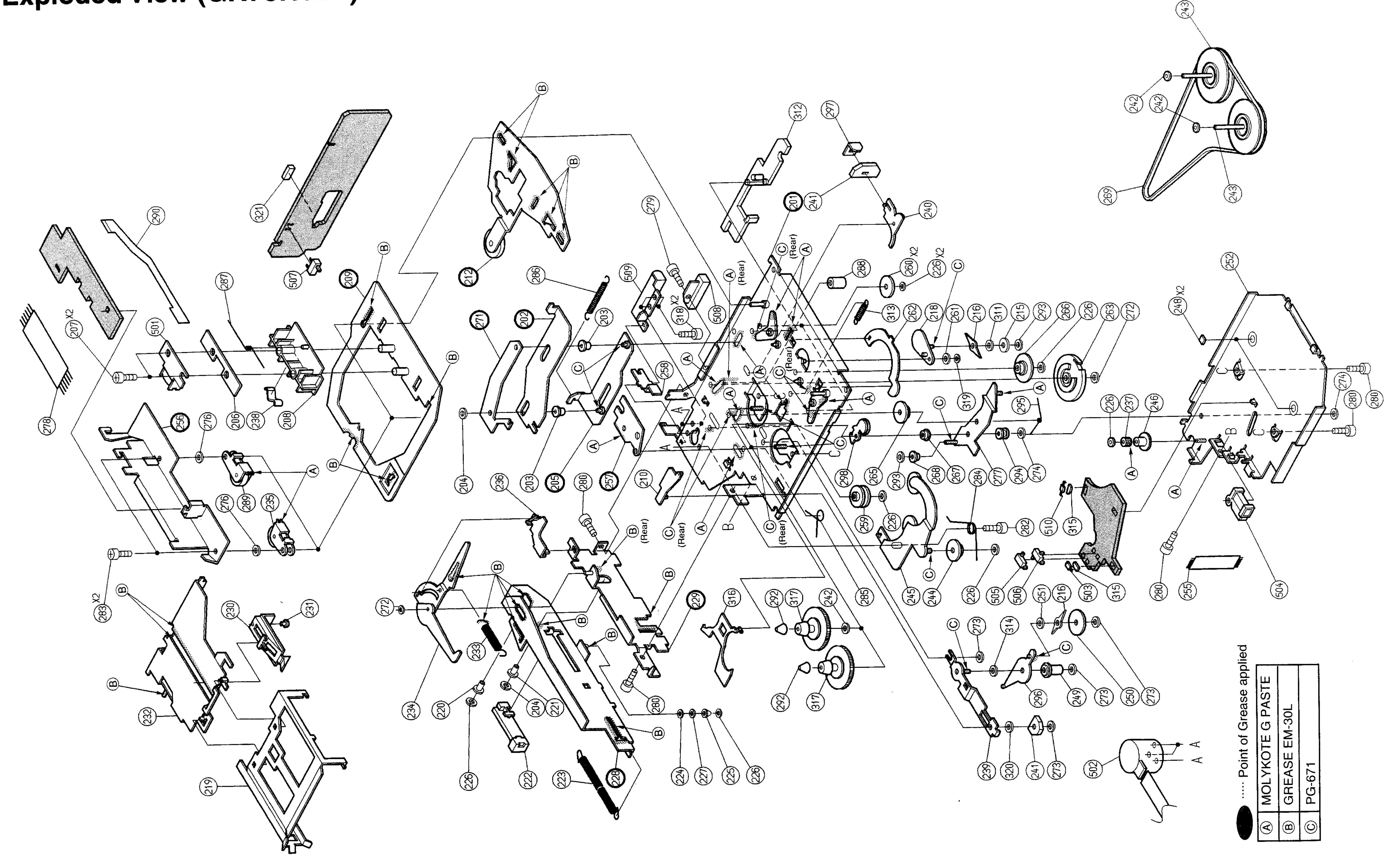
Exploded View (GR75H12H)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Point of Grease applied

Ⓐ	MOLYKOTE G PASTE
Ⓑ	GREASE EM-30L
Ⓒ	PG-671

Cassette Deck Mechanism Assembly Parts List

Symbol No.	Index	Part No.	Description
203		43A51119W01	Roller, Sub Head
204		04B41345P01	Washer, Lock (M1.2)
206	3-B	41A31756W01	Spring, Head (GR-Y)
207	2-A	03A38021W01	Screw, Flange (M2×4)
208	3-B	43B12545W01	Tape, Guide
210	3-D	01A30462W01	Assy., Riv. Lever R / F Sol.
215	2-F	44A30480W01	Gear, Planet
216		41A30475W01	Spring, Clutch
218	2-F	01A30824W01	Assy., Riv. Lever Reverse
219	5-B	07B40012W01	Holder, Cassette
220	4-C	43A12583W01	Roller, Eject
221	4-D	43A63281F01	Roller, Plate Base
222	5-C	44A82206F01	Rack
223	5-D	41B10386W05	Spring, GR (Rack)
224	5-D	43A10121W01	Roller, Eject (A)
225	5-D	43A71257W01	Roller, Eject (B)
226		04B41345P11	Washer, Lock (M1.2)
227	5-D	43A12377W01	Roller, Eject (C)
230	4-B	45B10376W01	Slider
231	4-B	47A63278F01	Shaft, Slider
232	4-B	01A40024W01	Assy., Riv. Plate Base
233	4-C	41B63283F11	Spring
234	4-C	01A40021W01	Assy., Riv. Eject Arm (D)
235	3-B	01B30863W02	Assy., Pinch Roller
236	3-C	45A10087W01	Lever, Pack In Switch
237	3-G	44A20314W01	Pinion, Eject
238	3-B	26A20537W01	Shield, Plate
239	5-F	01A40881W01	Assy., Riv. RF Link
240	2-F	45A40725W01	Lever, Play Sol.
241		76T10374W01	Chip
242	4-E	04S40075G05	Washer, Polyslider (M2.1)
243		01A30488W01	Assy., Flywheel
244	4-F	44A10141W01	Gear, Eject Idler
245	4-E	01A70048W01	Assy., Riv. Lever Clutch
246	3-G	44A10145W01	Gear, Eject
248	2-G	43A41656W01	Spacer, UHMW
249	4-F	44A30481W01	Gear, RF Idler
250	4-G	44A30483W01	Gear, RF
251	4-F	04S40075G58	Washer, Polyslider (M2.1)
252	2-G	01A71527W01	Assy., Riv. Cover Bottom
255	4-G	30T15126W10	Wire, PC Sensor (9P)
258	3-D	45A10101W01	Lever, Eject Sol.
259	3-E	49A30476W01	Pulley, Idler
260	2-E	44A30482W01	Gear, Take Up
261	2-F	44A30478W01	Gear, Sun
262	2-E	44B10135W02	Gear, Fix
263	2-F	44B70042W01	Gear, Pause
265	3-E	44A70044W01	Gear, Pause Idler (B)
266	2-F	44A30479W01	Gear, Reverse Idler
267	3-F	44A30485W01	Gear, Motor Idler

Symbol No.	Index	Part No.	Description
268	3-F	44A30487W01	Gear, Motor Clutch
269	2-F	42A31850W02	Belt, GR-H
272		04B41345P15	Washer, Lock (M1.2)
273		04B41345P02	Washer, Lock (M1.7)
274		04B41345P17	Washer, Lock (M1)
276	3-B	04B41345P32	Washer, Lock (M3.1)
277	3-F	01A30464W01	Assy., Riv. Play Clutch
278	3-A	30T15126W02	Wire, PC Joint (7P)
279	2-D	03S44205G78	Screw, Pan (M2×6)
280		03S44205G30	Screw, Pan (M2.6×4)
282	3-F	03A12132W03	Screw, Eject Clutch (M2×2.3)
283	4-A	03S43997P64	Screw, Pan (M1.7×3)
284	3-F	41A10384W01	Spring, Eject Clutch
285	4-E	41A10385W01	Spring, Cassette Push
286	2-C	41B10386W02	Spring, Sub Head
287	2-B	41A10387W01	Spring, Pinch Roller
288	2-E	43A12719W01	Roller, Pause
289	3-B	01B30863W01	Assy., Pinch Roller
290	2-B	84T25151W01	Head P.C.Board
292	4-E	49A40718W01	Reel, Cap
293		04B41345P35	Washer, Lock (M1.7)
294	3-F	43A30827W01	Spacer, Motor Idler
295	3-F	41A30490W01	Spring, Play Clutch
296	4-F	01A40882W01	Assy., Riv. Lever RF
297	1-E	43A41744W01	Lock, Solenoid
298	3-E	01A70940W01	Assy., Riv. Lever Pause
311	2-F	04B41345P46	Washer, Lock (M2.1)
312	1-E	45A70860W01	Dumper, Sub Head
313	2-E	41A71549W01	Spring, Reel Brake
314	4-F	04S40075G68	Washer, Polyslider (M2.1)
315		15A71833W01	Guide, Photo
316	4-D	01A71704W01	Assy., Riv. Lever Brake
317	4-E	01A45062W03	Assy., Panel
318	2-D	03S94385F47	Screw, Pan Nylok (M2×3.3)
319	3-F	04B41345P18	Washer, Lock (M1.2)
320	5-F	41A10097W02	Spring, Clutch
321	2-B	14A71558W01	Insulator, Cover

Miscellaneous

Symbol No.	Index	Part No.	Description
501	2-B	88T15971W03	Head
502	5-F	01V51800W42	Assy., Motor (13.2V-105mA)
503	4-F	51T15144W02	Sensor, Photo ON2170-R1
504	4-G	01T10371W01	Assy., R / F Solenoid
505	4-F	40T15382W01	Switch, Detector (PACK DOWN)
506	4-F	40T15382W01	Switch, Detector (METAL)
507	2-B	40T15222W01	Switch, Detector (PACK IN)
508	2-D	01T15249W01	Assy., Play Solenoid
509	2-D	01T10369W02	Assy., Eject Solenoid
510	3-F	51T15144W02	Sensor, Photo ON2170-R1